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ABSTRACT

This report describes a method to estimate the number of migrant and seasonal farmworkers present in a prescribed area during crop harvest, and to pinpoint areas of high need for health and social services. The collection of health clinic and federal program data on migrant and seasonal farmworkers in Florida, northwestern Ohio, and Maryland's eastern shore demonstrated that the only available information of known quality and precision on which to base estimates is the Census of Agriculture, supplemented by special survey data. Accordingly, the suggested model utilizes crop acreage data, harvest season length, person hours needed to harvest a particular crop, and person hours worked per day, plus demographic information based on special surveys, migrant clinic data, Employment and Training Administration data, and Migrant Student Record Transfer System data. This model is simple and precise, makes use of data already available, can produce small area estimates, and is not affected by workers' immigration status. The model does not primarily produce demographic information, and errors may stem from outdated crop data or environmentally caused fluctuations in crop production. The report includes 10 references, 16 graphs and tables, appendices outlining the procedure for using this method, and estimates of migrant and seasonal farmworkers needed at harvest in 42 states, by country. (SV)

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ED299075

Methodology for Designating High Impact

Migrant and Seasonal Agricultural Areas

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For:

U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES
Public Health Service
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Louise Woerner, President of HCR, Barbara Robinson, Project Director, Leon Hunt and Hillard Davis, Statisticians, prepared the report. Administrative support was provided by Cinda Berry. Vera Jenkins typed the drafts and prepared the report for distribution.

PREFACE

This report describes a methodology and the process by which it was developed to estimate the number of migrant and seasonal farmworkers present in a prescribed area during the harvesting of crops and seeks to pinpoint, in terms of health and social services, high impact areas of need. How well this, or any model, describes the events is necessarily dependent upon the accuracy of the underlying assumptions and the accuracy of the data available for input. This report discusses assumptions made and the subsequent selection of the recommended model.

The development of a national model is problematic in that many of the variables and parameters are area- and crop-specific, requiring modification to reflect these differences. Any estimating procedure, short of performing a complete census, has inherent errors. The difficulty is in selecting a procedure to minimize errors and maximize the confidence level of the procedure.

Simplicity was another concern. The model should be sufficiently simple so that planners and professionals at all levels of the health and social care spectrum can use it, not just the theoreticians who develop the model.

To develop this model HCR studied data in terms of type, accuracy, quality and amount. After exploring a number of possibilities HCR decided that a model based on crop acreage data was most appropriate. Data necessary to develop this model, length of harvest seasons, crops by acres and by county, human harvest production level and time worked by farmworkers were all available for use. The model did not depend on information supplied by the workers which would be affected by their legal immigration status.

To develop the most accurate and simplified model possible, within given time and financial constraints, HCR visited the Delmarva region and contacted persons responsible for the delivery of migrant health and social services in many areas of the United States. Data on farmworkers collected by the Departments of Agriculture, Labor and Education and migrant clinics were also reviewed.

TABLE OF CONTENTS

	Page
I. Executive Summary	1
A. Introduction	1
B. Findings	5
C. Problems and Constraints	6
II. Recommendations	8
III. Methodology For Determining High and Low Impact Areas	9
A. Considerations For Methodology Selection	9
B. Maryland Eastern Shore	10
C. Northwestern Ohio	20
D. Southwest Central Florida	25
E. Development of An Alternate Methodology	26
1. Limitations	33
2. Advantages	33
3. Disadvantages	34
IV. Conclusion	35
Appendix I - Procedural Manual	
Appendix II - Estimates of Number of Farmworkers	

I. Executive Summary

Methodology for Designating High Impact

Migrant and Seasonal Agricultural Areas

I. EXECUTIVE SUMMARY

A. Introduction

The health needs of migrant and seasonal farmworkers became a federal issue in the late 1950s when Congress established a committee to investigate the lack of sanitary conditions and inadequate immunization which posed serious health problems for migrants and residents of farming areas. After extensive hearings, the Senate Committee on Labor and Public Welfare concluded in 1961 that migrant and seasonal farmworkers had a high level of need and a low level of health care, and that no county or state had been able to cope with the problem. As a result, Congress enacted Public Law 87-692 (76 Stat. 592) in September 1962, amending Title III of the Public Health Service Act of 1944, allocating federal grant money to stimulate state and local health programs to provide needed health care to migrants and seasonal farmworkers.

A major impediment in meeting the health needs of migrant and seasonal farmworkers in this country has been, and continues to be, the lack of accurate data on their numbers and location. For the Department of Health and Human Services to effectively meet its obligation under Section 329 of the Public Health Service Act, allocating federal funds to High Migrant Impact Areas on a first priority basis, a methodology is needed to enumerate migrants and seasonal farmworkers by area.

There is a number of factors which makes accurate estimates of migrants and seasonal farmworkers difficult. The definitional problem is paramount, as the determination of who is a migrant or seasonal farmworker varies from agency to agency, artificially dissecting the population and impeding accurate estimation. For example, the Department of Labor defines a "migrant farmworker" as "a seasonal farmworker who performed during the preceding

twelve months agricultural labor which requires travel such that the worker is unable to return to his/her domicile within the same day."[1] The Public Health Service Act (42 U.S.C.(254 (b)(a)(2)) uses a different definition, while yet another definition (migrant agricultural worker) is included in the Migrant and Seasonal Agricultural Protection Act, Public Law 97-470 which states that "Migratory Agricultural Worker means an individual whose principal employment is in agriculture on a seasonal basis, who has been so employed within the last 24 months and who establishes for the purpose of this employment a temporary place of abode."

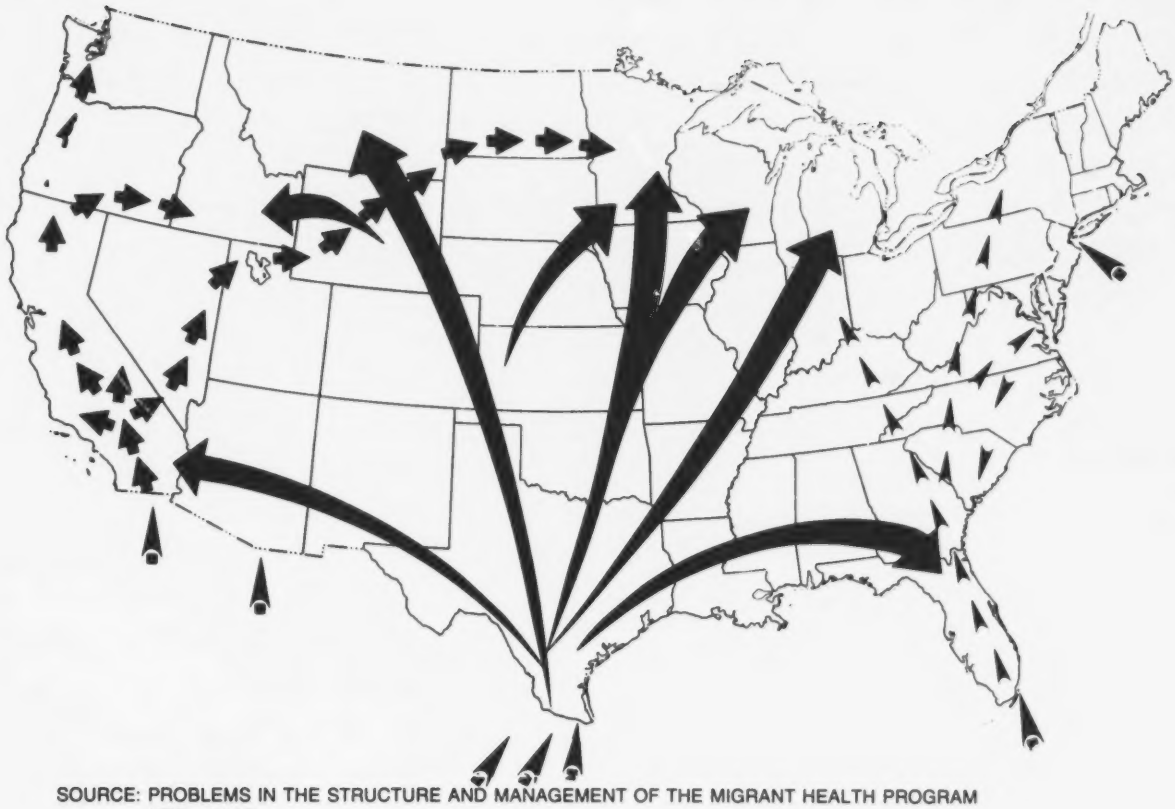
For purposes of this report, a farmworker is any person who works for wages to plant, maintain, harvest or process a farm product for any period of time. The two groups of workers who make up the farmworkers population are the settled (seasonal farmworkers) and migrant farmworker. Migrants are those farmworkers who cannot return to the residence they maintain at the end of the work day; seasonal farmworkers are those who can.

The constant movement of migrant workers and their families compounds the problem of estimation. The extent to which students comprise a portion of the working migrant force is unknown. Another factor of increasing importance is the influx of illegal or undocumented aliens into the migrant labor force. Estimates of illegal or undocumented aliens in the Southwest alone are in the millions. An accurate count of this last subgroup is difficult because aliens often desire to remain hidden or because employers are unwilling to report them. Finally, the statistics do not reflect unemployed migrants who look for work during economic slow down.

It is commonly believed that migrants move from their home base to work areas through three streams. The three home-based areas are Florida, Texas and California. Each stream moves northward from the home base. Workers also come from Mexico, Puerto Rico and the West Indies. Figure I shows how migrants fan-out from home bases into the three streams.

Current methods of collecting data on migrants and seasonal farmworkers are divided among a number of service agencies and the results are often skewed

Figure 1. Movement of Migrant Farmworkers
The Major Migrant Streams



SOURCE: PROBLEMS IN THE STRUCTURE AND MANAGEMENT OF THE MIGRANT HEALTH PROGRAM
HRD - 81-92
MAY 8, 1981

Western Stream
Eastern Stream
Midwestern Stream

to meet the needs of the data collectors. The monthly compilations by the Department of Labor on migrant, seasonal and foreign laborers are completed for purposes of unemployment insurance. Because the majority of agricultural employers in the United States are not covered by unemployment insurance, many migrants are missed in this count. Additionally, the Employment and Training Administration (ETA 223) data are an estimate of unknown reliability and accuracy. Since there is no reliable annual summary, these figures cannot be compared with any other data available nationally.

The Department of Education, Office of Migrant Education, implemented the Migrant Student Record Transfer System (MSRTS) to improve the continuity of education and health record transfers between school districts serving migrant children. MSRTS data are collected by recruiters of local education departments who visit the schools and migrant camps to register migrant students and children of school age not currently enrolled in school programs. The accuracy of MSRTS data therefore depends on the aggressiveness of the local recruiters. Because MSRTS reporting efforts have focused on rural school districts, the numbers of migrant children residing in urban school districts are not reflected in MSRTS reports. Additionally, MSRTS data reflect information only on the student and not family members.

A third method of counting migrant farmworkers is the biennial data compiled by the Bureau of Census for the Department of Agriculture. The 1983 count, however, has indicated a 50% decrease from the 1979 total of 217,000 migrant farmworkers. Because changes in production patterns cannot account for this decrease, it is believed that error may have been caused by the substitution effect of illegal aliens and/or changes in the sampling pattern.

It is obvious that provision of health care services to those migrant and seasonal farmworkers most in need will continue to be severely handicapped unless a model for estimating the migrant population is developed that can be used in areas with different characteristics and demographics. Such a model must provide unbiased results of measurable accuracy and reliability.

The purpose of this research was to develop a methodology for health and social service planners to effectively estimate the number of MSFWs in a particular area.

B. Findings

Given below is a summary of the findings that resulted from HCR's examination of data available on farmworkers, from trips to migrant and farmworker areas and on migrant projects.

- Health data at clinics serving migrants and other farmworkers are not compiled and reported in such a way to make it usable for program planning or estimation of migrant population. Clinics, with few exceptions, were unable to provide estimates or breakdowns by demographic characteristics of their migrant population for their service delivery area. This fact severely limits the ability of the clinics and the Office of Migrant Health to plan for the delivery of services.

- Clinic usage data, while a good indicator of the types of health services needed by the migrant population, are an inaccurate measure of the migrant population since they reflect only information on the users of migrant health services, which is a very small percentage of the total MSFW population. Clinics need more than a simple estimate of the number of migrants by person month; they need to be able to estimate populations to be served by demographic characteristics. This means that migrant clinics must develop more broad-based population estimates for their area. To allow for planning at the federal level as well as for comparisons of health projects, these estimates should be ideally on a county-by-county, or other small area, basis.

- Estimates of MSFWs based on ETA 223 reports were usually 1.4 - 5.0 times smaller than those based on a completed registration of MSFWs as conducted by the Delmarva health clinic.

- Estimates of MSFWs based on biennial data compiled by the Bureau of Census for the Department of Agriculture are of unknown reliability, and tend to underestimate the number of these workers.

- It is necessary to use multiple data elements to construct a procedure to estimate migrants and seasonal farmworkers. We propose that a feasible model for estimating the number of MSFWs needed to harvest labor intensive crops can be designed using the following information:

-- Number of acres harvested for each crop requiring unskilled labor to harvest;

-- Number of hours needed to harvest each labor intensive crop;

-- Harvest schedule and length of harvest season for each crop;

-- Average number of hours worked by one migrant or seasonal farmworker during a 24-hour period; and

-- Demographic characteristics of the migrant family based on information collected by using special surveys, MSRTS or migrant clinic data.

C. Problems and Constraints

The major problems and constraints encountered in the implementation of this project were associated with the unavailability of data from various sources. This was true even with organizations under OMH regulations. A few of these problems are described below:

- Attempts to collect data from the more than 130 migrant health clinics throughout the U.S. through written and verbal requests resulted in the receipt of data from fewer than ten clinics. In most instances the clinics stated that:

  -- Data were in no condition to be released;

  -- Staff did not have the time to compile the data in the format requested; and,

  -- They needed special authority to release the data.

- National data, especially the Migrant Student Record Transfer Data, were difficult to collect, particularly at the county level. The organization responsibile for processing and storing the data did not have access to the codes necessary to supply the data at the county level. MSRT data would have been usable if each state had retained an individual to decode the data and prepare county-by-county figures. Even if county-level data were available, the relationship between enrolled students to the migrant population is unknown, and varies according to such factors as ethnicity and type of crop.

- Most data sources with estimates of the MSFW population were compiled for reasons other than estimating the migrant and seasonal farmworker population. The result is that existing data are in most cases incomplete and of undetermined reliability.

- Regional Migrant Health Coordinators were unable to supply information on various movement and entry/exit patterns of the migrant population in their regions.

- Investigative efforts were limited in downstream areas where migrant populations are much different from those in upstream areas.

II. Recommendations

Methodology for Designating High Impact

Migrant and Seasonal Agricultural Areas

II. RECOMMENDATIONS

The following recommendations are based on HCR's research findings and reflect HCR's opinion of the necessary measures the Office of Migrant Health should undertake to develop the capacity to produce estimates of migrant and seasonal farmworker populations.

- The estimation model should be based on crop acreage data, the length of harvest season, person hours needed to harvest a particular crop and person hours worked per day.
- The Office of Migrant Health should consider refining the suggested model to include the acquisition of more recent regional parameters.
- Regional and professional clinic staff should be trained to make estimates which will result in self-sufficiency at those levels.
- Regional staff should maintain, or have access to, ETA 223, MSRTS and clinic data for all counties in their jurisdiction to facilitate the collection of data as needed at regional and national levels.

III. Methodology

Methodology for Designating High Impact

Migrant and Seasonal Agricultural Areas

III. METHODOLOGY

A. Considerations for Selection of Methodology

To determine procedures to be used to develop a model to estimate MSFWs, certain considerations are important. It is not necessary that these numbers be exact, that is, correct to the last individual migrant. The designation is essentially dichotomous in nature, viz, high impact or not. However, it is important that estimates are unbiased, or where biased that the nature of the bias is known and the order of magnitude of the error is also known, so that comparisons among areas will be valid. For instance, it might be sufficient to know the monthly population to the nearest thousand workers. If the actual population of county A of 4,352 was estimated at 4,000, the actual population of county B of 1,778 should appear as 2,000. The important fact is that county A's peak migrant count is much larger than B's. In this case, the level of accuracy could be justified on the grounds that there is no practical difference in public health policy between 4,000 and 4,352 or between 2,000 and 1,778, since the decision to allocate a facility would not change if the more accurate count were known.

The effective use of estimates requires a consideration of their inherent biases and magnitude of error. For instance, if the estimates for a group of counties were consistently low by 10%, so that county A's actual population of 4,352 was recorded as 3,917 and county B's population of 1,778 as 1,600, the order of magnitude estimates would still be 4,000 and 2,000 so there would be no practical effect. However, if biases among counties (or areas) are unequal, and in different directions, relative magnitude would be changed. Here both counties might be thought to contain 3,000 migrants during the month in question, and thus be regarded as the same migrant population, when actually one is more than twice the size of the other.

The methodology to estimate migrant populations focuses on two crucial questions:

- How many unique and independent migrant data sources exist in a geographical area, e.g., county, region or state?
- What are the relative sizes of the population estimates from each source, and what are the probable levels of accuracy and bias in each?

The determination of data sources depends on a detailed study of a particular locale. Answers to the second question can only be arrived at after a careful appraisal of the characteristics of each data source, especially the processes by which migrants are actually counted or estimated. To answer these questions, three agricultural areas were studied in detail: Maryland Eastern Shore (Delmarva), Northwestern Ohio and Southwest Central Florida.

Since ETA 223 provides the most readily available data source on migrants, our studies focused on determining the feasibility of using this material and information from localities to estimate migrant and seasonal farmworker populations. The major problems with ETA 223 data are the accuracy of this data and its ability to reflect the arrival and departure of the migrants.

This methodology assumes that high impact areas can be designated by applying certain correction factors to a thorough assessment of the precision and variability of ETA 223 estimates.

B. Maryland Eastern Shore

To test the accuracy of ETA 223 data we obtained clinic registration records for migrants (local seasonal workers were excluded) working in eight Maryland Eastern Shore counties served by the Delmarva Clinic. Analysis of these records allowed us to generate a monthly record of migrant residents in each of the eight counties in 1983. These series were then compared to corresponding ETA 223 bi-monthly series, collected by the Maryland Employment

Security Administration from different sources. Results of these comparisons were as follows:

- Delmarva Migrant Health Project (DMHP) registrations are made on a standard form (Figure 2), which includes the migrant worker and his or her dependents' names and demography, the county and camp where they are residing, crew leader, dates of arrival and departure as well as other background and tracking data. Because registrations identify specific individuals, they yield unduplicated counts of populations by county and month. These records formed the basis of our analysis.

- The easiest way to see how the two estimates of the migrant populations are related is to plot the time series data (number of migrants present in a county each month) from the ETA 223 and from the DMHP registrations on the same graph. Figures 3-8 show these graphs. The two series behave in the same general way--both rise to a peak in the late summer harvesting months, then drop in the fall. However, in almost every case, ETA 223 population estimates begin to rise later, do not go as high and drop sooner than do DMHP registrations. This pattern is so consistent that it allows us to conclude that ETA 223 data systematically underestimate migrant populations, both in number and in duration of stay (for these counties).

- To assess the level of underestimation given by ETA 223 data serial correlation were made between the two series. The results of these correlations are included in Figures 3-8.

- If all points fell in a straight line having a slope of one (45°), then DMHP registrations would equal ETA 223 counts. This is clearly not the case since points rarely fall on a straight line (correlation is poor) and the slope of the inferred line is always greater than one, ranging from 1.4 to 5. This means that DMHP registrations are, on the average, 1.4 to 5 times as great as ETA 223 estimates, depending on the county under consideration.

- Thus ETA 223 estimates are both biased (downward) and are inconsistently biased. The reason for this inconsistency is unclear. A partial explanation might lie in the demography of the migrants in the various counties. ETA 223 counts workers, while DMHP counts both workers and their dependents. The number of dependents is strongly related to race, with Hispanics having

large families and Haitians usually having none (Table 1). Therefore, in counties where the migrant population is chiefly Haitian, DMHP registrations ought to be closer to ETA 223 counts. This appears to be true for Dorchester County (Figure 3). Conversely, in counties where migrants are predominantly Hispanic, the error should be large (because children are omitted). Again this interpretation seems to hold for Queen Anne's and Kent Counties (Figure 4). However, other cases are ambiguous. Some, such as Worchester, have even greater disparities between the two estimates which cannot be explained by racial composition, but must be the result of undercounting.

Table 1
Migrant Population in DelMarva by Age and Ethnicity - 1983
Migrant Population in Federalsburg by Race and Age - 1983

RACE	Age	1	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46+	TOTAL
Haitian	#	22	34	1	5	22	124	152	77	62	45	30	574
	%	1.8	2.9	0.1	0.4	1.8	10.4	12.7	6.4	5.2	3.8	2.5	—
Mexican/	#	9	28	33	46	61	27	14	11	10	18	32	289
American	%	0.8	2.3	2.8	3.9	5.1	2.3	1.2	0.9	0.8	1.5	2.7	—
Black	#	3	11	4	8	20	34	30	29	29	24	51	243
	%	0.3	0.9	0.3	0.7	1.7	2.9	2.5	2.4	2.4	2.0	5.4	—
Other	#	2	1	1	2	5	12	11	9	5	7	9	64
	%	0.2	0.1	0.1	0.2	0.4	1.0	0.9	0.8	0.4	0.6	0.8	—

Migrant Population in Westover by Race and Age - 1983

RACE	Age	1	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46#	TOTAL
Haitian	#	11	19	39	5	14	76	77	61	36	23	11	372
	%	0.9	1.5	0.2	0.4	1.1	5.9	6.0	4.7	2.8	1.8	0.9	—
Mexican/	#	30	72	68	68	92	86	51	35	43	9	32	586
American	%	2.3	5.6	5.3	5.3	7.1	2.3	4.0	2.7	3.3	0.7	2.4	—
Black	#	7	17	18	18	42	6.7	35	35	34	8	43	294
	%	0.5	1.3	1.4	1.4	3.3	43	2.7	2.7	2.6	0.6	3.2	—
Other	#	1	4	3	3	5	0.9	0.8	0.4	0.5	0.5	0.3	50
	%	0.1	0.3	0.2	0.2	0.4	0.7	0.6	0.3	0.4	0.4	0.3	—

FIGURE 2

County_____ Head of Household_____
(Last name) (First name) (MI)
Camp_____
Crewleader_____ Migrant____ Seasonal_____
Date of Arrival_____ Date of Registration_____

Race of Ethnicity: B M/A P.R. Haitian Jamaican W Other_____
Birthdate:_____ Age:_____ Sex_____
Social Security #_____ Camp Phone #_____
Directions to Camp:_____

Yearly Income:_____ Health Insurance Type:_____ V.A._____

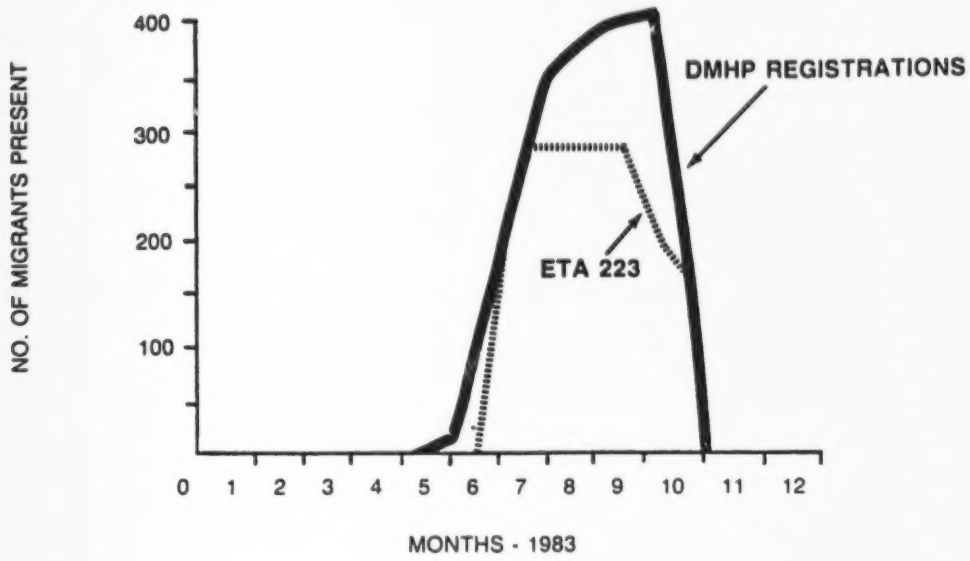
Mailing Home State Address:_____
_____ Home Phone #_____
Person to Contact in an Emergency:_____Relationship_____
Address:_____Phone #_____
Home Base Clinic_____Phone #_____

Family Roster

Name: (Last, First, MI)	S.S.#	Birthdate	Age	Sex	Relationship to Head of Household

How long will you be in this area?_____
Where are you going next?_____
Comments:_____
Service Worker_____

Figure 3.
Serial Correlation Between ETA 223 and DMHP Registrations
Dorchester County, Maryland (24% Black American, 74% Haitian)



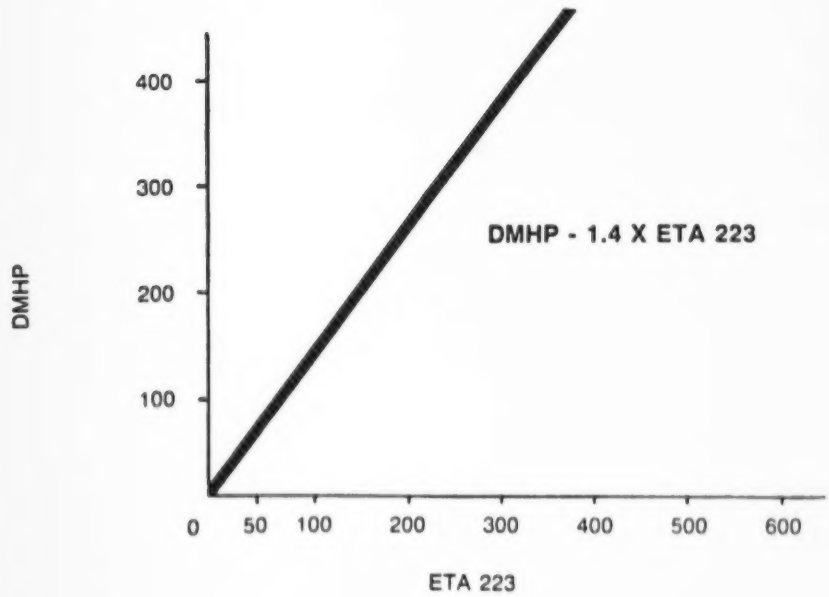
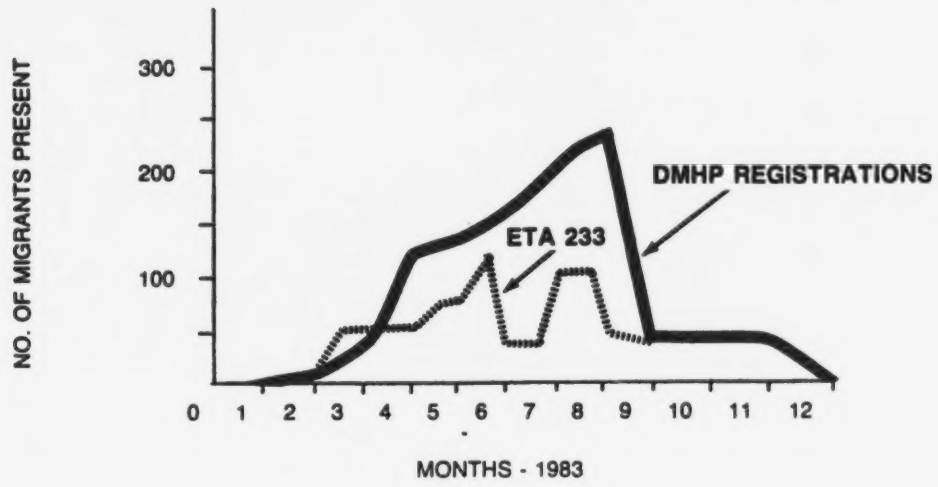


Figure 4.
Serial Correlation Between ETA 223 and DMHP Registrations
Queen Anne's and Kent Counties (100% Hispanic)



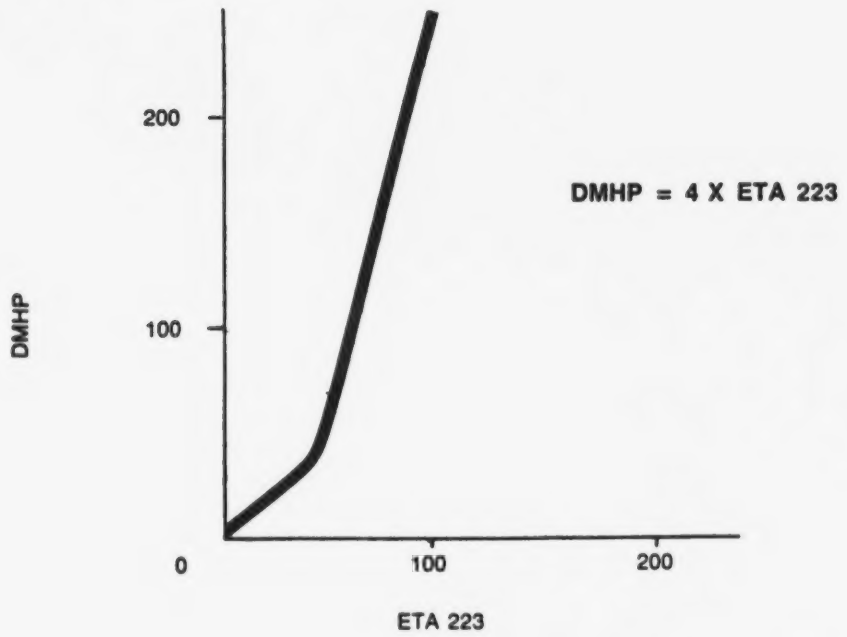
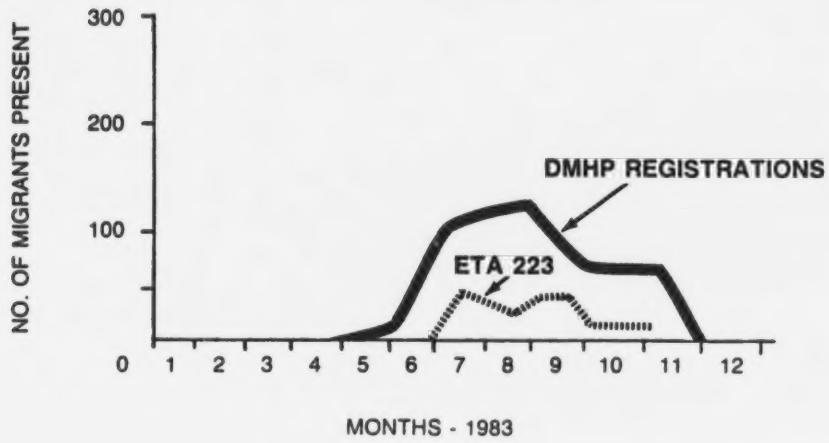


Figure 5.
Serial Correlation Between ETA 223 and DMHP Registrations
Wicomico County (44% Black American, 42% Haitian)



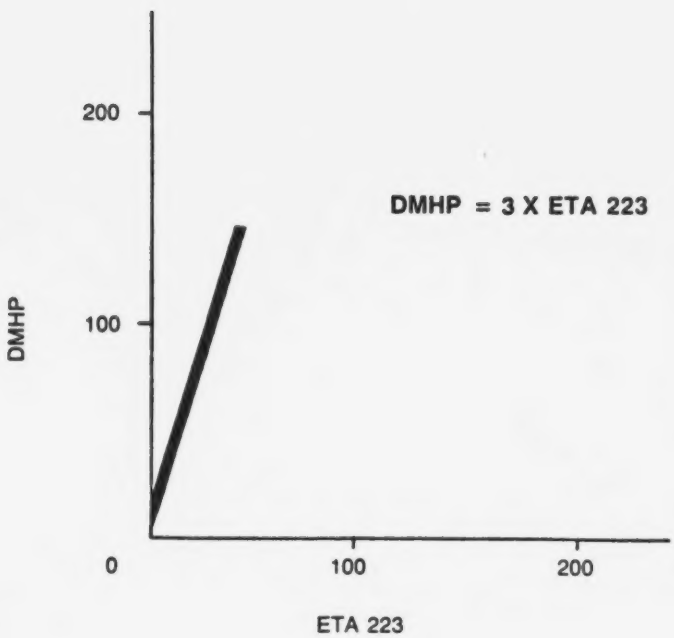


Figure 6.
Serial Correlation Between ETA 223 and DMHP Registrations
Caroline and Talbot Counties
(29% Black America, 52% Haitian)

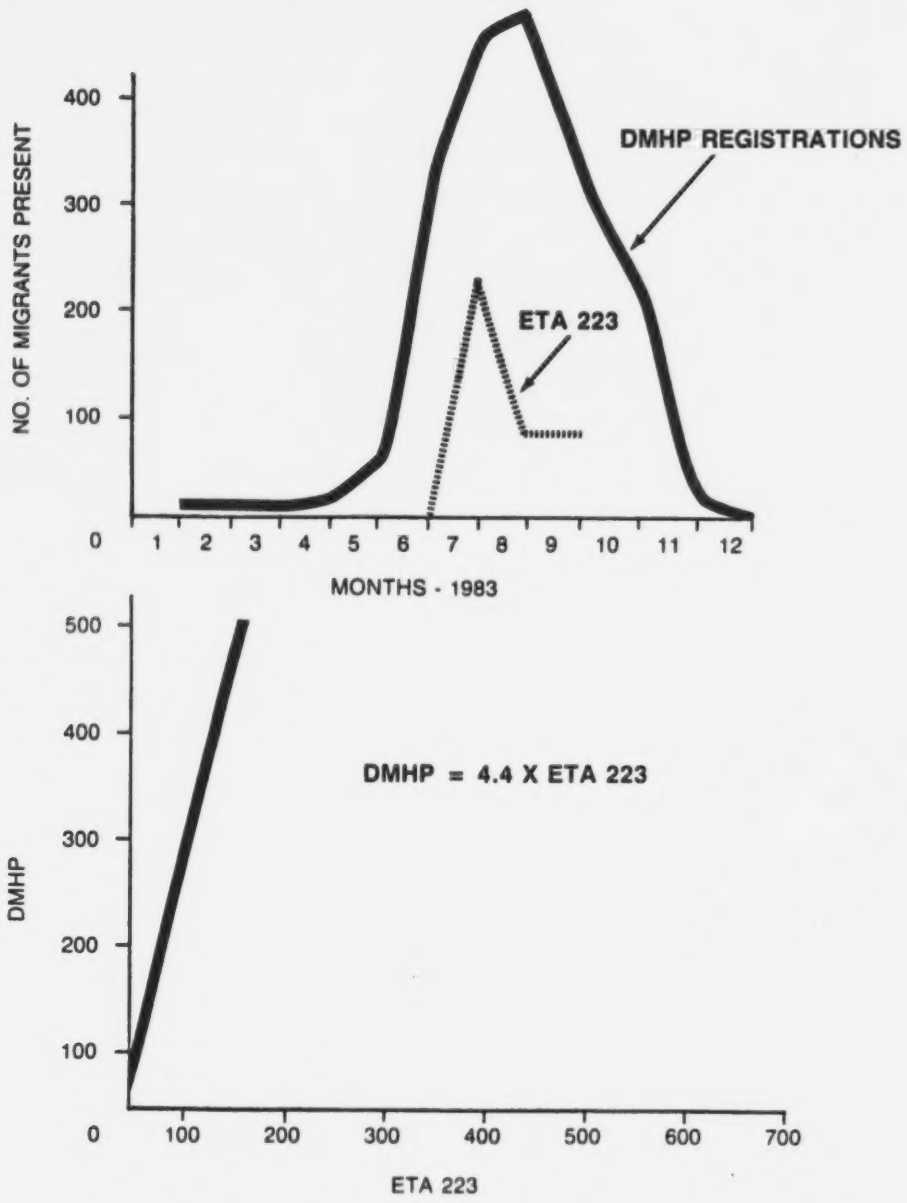
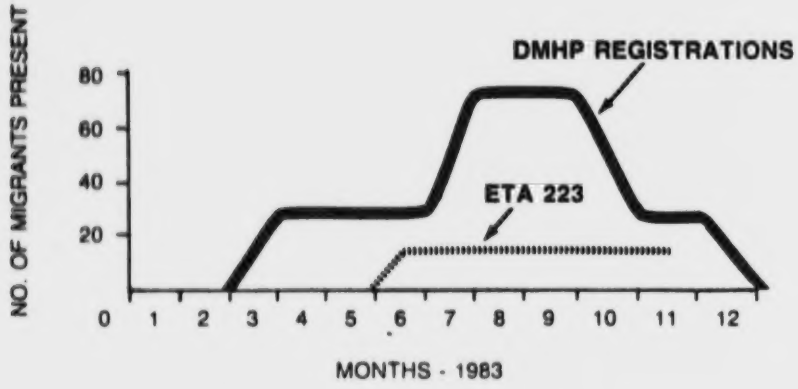


Figure 7.
Serial Correlation Between ETA 223 and DMHP Registrations
Worcester County (55% Black American, 35% Hispanic)



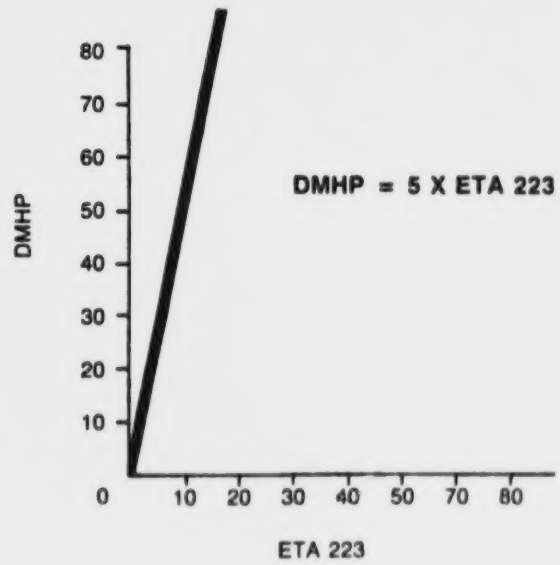
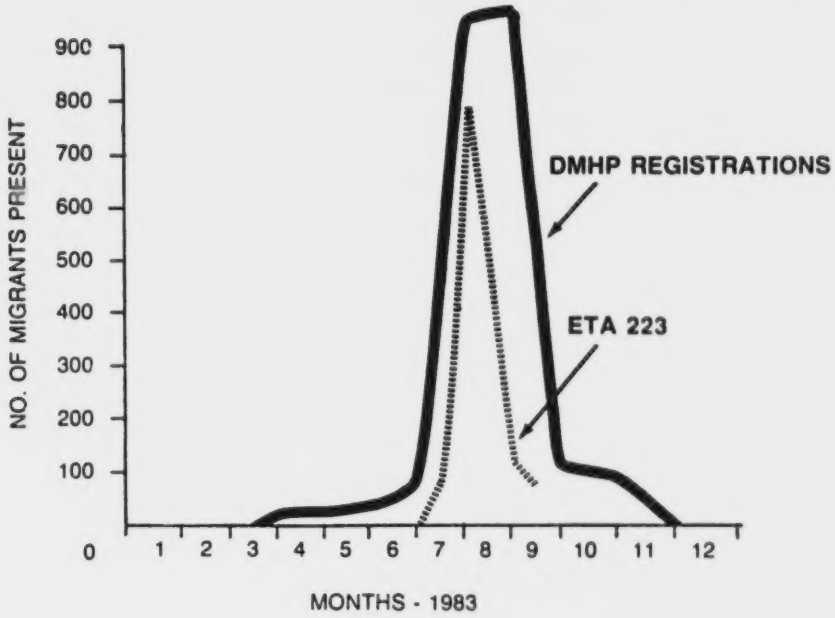
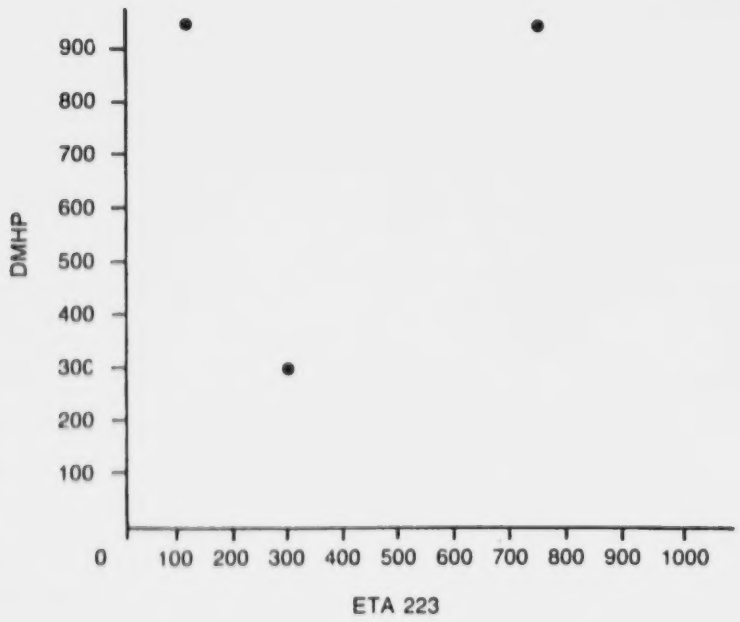


Figure 8.
Serial Correlation Between ETA 223 and DMHP Registrations
Somerset County, Maryland (45% Black American, 51% Hispanic)





Conclusions

This analysis, based on a comparison of ETA 223 estimates of migrant populations with Delmarva Migrant Health Project's registrations of the same populations in eight counties in eastern Maryland, yields the following results:

- ETA 223 data systematically underestimated the numbers of migrants present during most months of 1983.
- Underestimation of migrants by ETA 223 is inconsistent, being larger in some counties than others. This may be due, in part, to the differences in family size among different ethnic groups, since ETA 223 does not record families, but only workers.
- There is a lag in ETA 223 recording of arriving migrants, and possibly in the anticipation of their departure, resulting in a systematic reduction in migrant person-months, independent of total undercounting.

These conclusions do not pertain to ETA 223 estimation of local seasonal farmworkers.

Together these conclusions suggest that ETA 223 data greatly understate both the numbers of migrants, and the durations of their stay in person-months. They are, therefore, a poor means of designating high-impact counties, without further refinement based on local knowledge of migrant demography and possibly crop data.

C. Northwestern Ohio

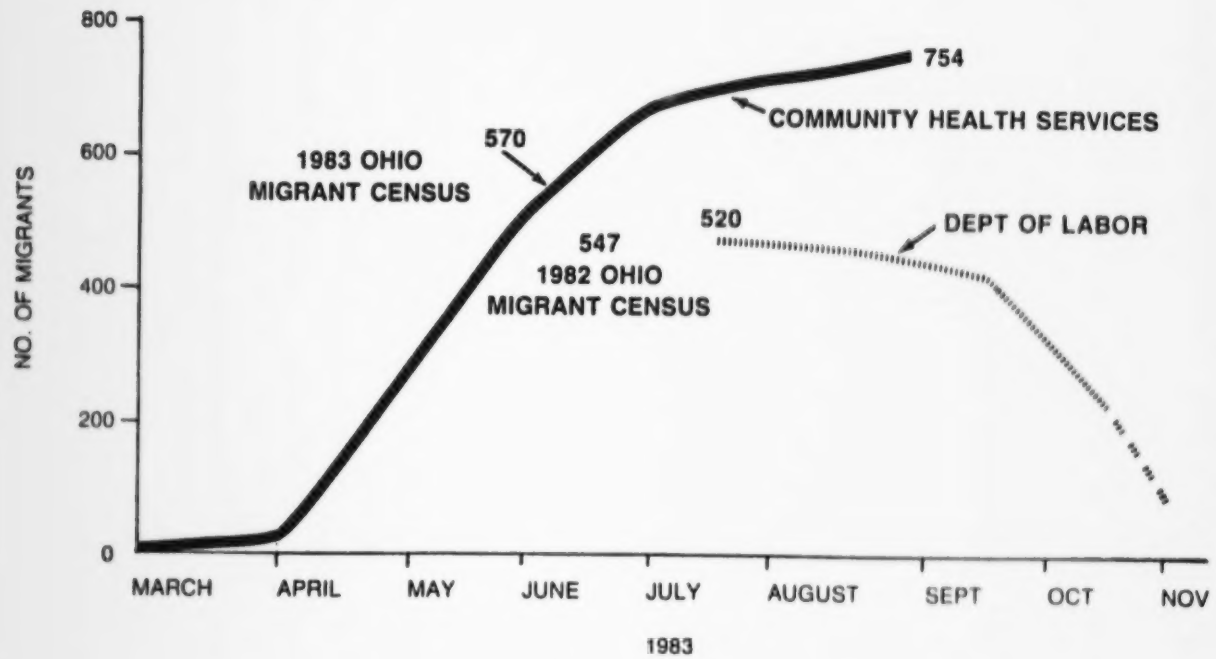
With the assistance of Bonnie Bain, Finance and Data Coordinator, of the Clinicas Migrantes Regionales, registration figures were compiled on the number of migrant families and individuals by county and by month for 1983. Data were also collected on the sex and age of individuals. Information on the departure of these individuals from the areas is not recorded by the clinic.

ETA 223 data available for four counties served by the clinic were compared with the registration counts. Because initial analysis of these two data sources showed such a disparity and inconsistency between the counts, the ETA 223 data were also compared with the Ohio Migrant Census Report. The results of our analysis are discussed below.

In Seneca and Wood Counties, as in Maryland, clinic registrations exceed ETA 223 estimates by 50-100% at the peak, though clinic data are less precise than in Maryland because they do not explicitly report departure.

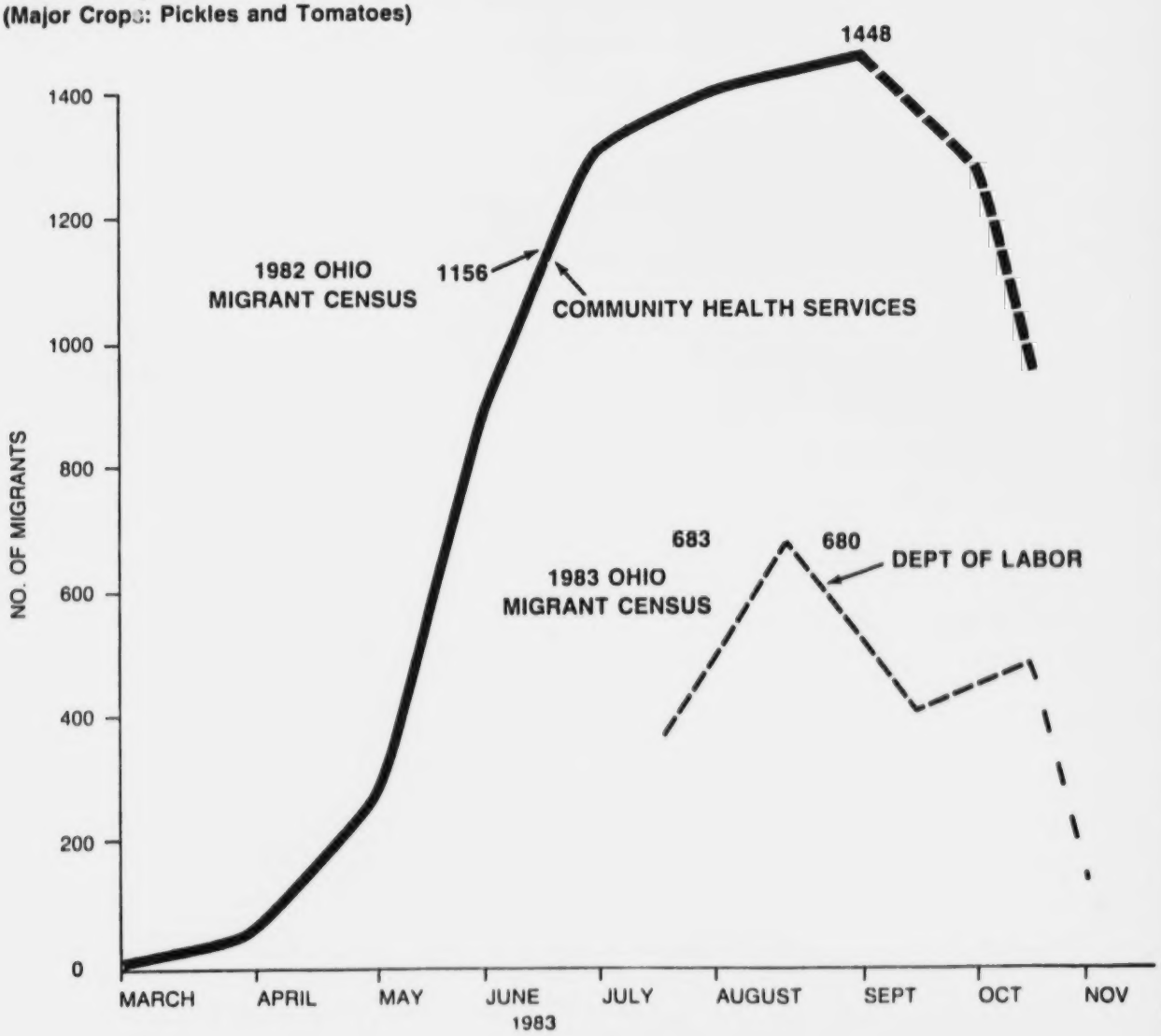
In Seneca County (Figure 9), the 1982 and 1983 Ohio Migrant Census reported 547 and 570 individuals respectively. These counts are similar to the peak value of 520 reported on ETA 223 in 1983, suggesting that the Ohio Migrant Census relied on the same sources used in compiling ETA 223, but missed many individuals known to Community Health Services.

Figure 9.
Number of Migrants by Month and Source of Estimate;
Seneca County, Ohio
(Major Crops: Pickles and Tomatoes).



Wood County (Figure 10) gives a slightly different picture. The 1983 Ohio Migrant Census of 683 is virtually identical to the ETA 223 peak of 680 in August 1983. Both are far below the cumulative count of 1448 individuals registered by Community Health Services. However, the 1982 Ohio Migrant Census count of 1156 appears more like clinic data than Labor Department data, suggesting that the Migrant Census may have used different sources for the same county in different years.

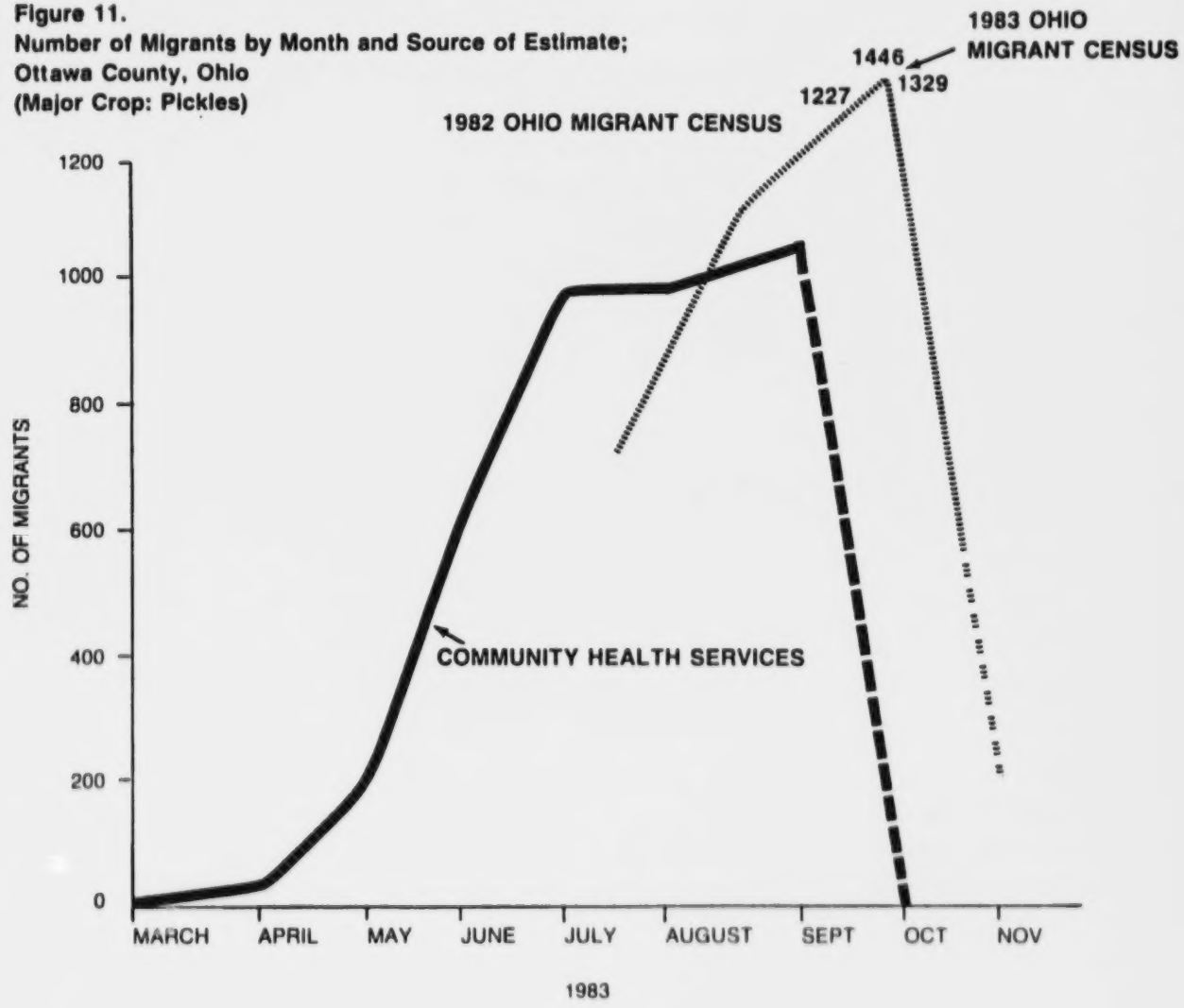
Figure 10.
Number of Migrants by Month and Source of Estimate;
Weed County, Ohio
(Major Crops: Pickles and Tomatoes)



For Ottawa and Huron Counties the relationship between clinic and ETA 223 data is reversed: ETA peak estimates exceed clinic registrations by 30% to 50%.

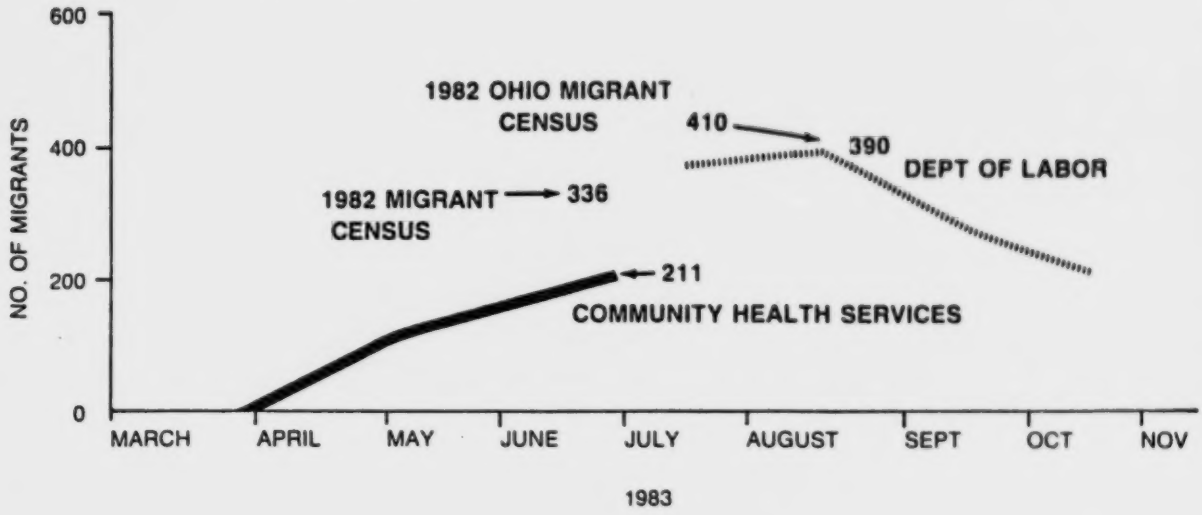
In Ottawa County (Figure 11), both 1982 and 1983 Ohio Migrant Census counts are quite similar to the 1983 ETA 223 peak, and all exceed Community Health Service registrations by 20% to 40%. Again, it seems that the Migrant Census used the same sources at ETA 223.

Figure 11.
Number of Migrants by Month and Source of Estimate; Ottawa County, Ohio (Major Crop: Pickles)



Huron County (Figure 12) shows a similar picture with Migrant Census counts closely resembling ETA 223 data.

Figure 12.
Number of Migrants by Month and Source of Estimate;
Huron County, Ohio
(Major Crops: Pickles and Tomatoes)



Conclusion

It is not possible to determine the reliability of the Ohio ETA 223 data because the reliability of the comparable data, Ohio Migrant Census Reports and Community Health Clinic data, are unknown.

The Ohio Migrant Census reports seem to be based in general on the same data sources as ETA 223. Both count more migrants than were registered by the Community Health Services clinics in several counties. Their similarity does not prove their numbers correct, and Community Health Services registrations incomplete, because both could be using the same erroneous data. However, if they are correct, the reason for the incomplete clinic registrations in some is unknown.

D. Southwest Central Florida

HCR contacted E. Zeke Sims, Administrator of Agricultural Programs, Division of Labor to obtain information on the ETA 223 reports. From him, we learned that he receives data from four Florida Job Service Offices throughout the state which, in turn, collect information from the growers under their jurisdiction. The report, generated bi-monthly, samples farms across the state and estimates the migrants per acre by crop. Mr. Sims informed us that the data are reported by area and not county.

To determine the county location of farms sampled, we contacted Gordon Punshon, Assistant Bureau Chief, Operations Bureau, Department of Labor. He confirmed the information obtained from Mr. Sims and emphasized that it was not possible to collect data on a county level, nor was it possible to identify farms used in the sample.

HCR then contacted Joe Datres, Assistant Bureau Chief of the Department of Labor and Employment Security and requested the same information. After conferring with the statisticians and the monitor advocate who oversees migrant affairs in his office, he reported that there is no method for collecting the data; estimates of migrants are not made on the basis of a sample.

At the suggestion of Ms. Lois Hill, Supervisor of Primary Health Care Services, HCR contacted Lalai Hamaic, Director of the Lee County Migrant Health Council, Inc., in Ft. Myers, a clinic with service sites in Ft. Myers and Bonita Springs, serving Lee and North Collier counties. The clinics are both nurse- and physician-run, providing active outreach services, but registering migrants only when they seek services. Furthermore, they do not record migrant departure dates and have no way of ascertaining this due to the nature of the migrant population which is both transient and static.

Conclusion

ETA 223 data from states that use the same collection procedures as Florida are unusable for estimating migrant populations by county. The data are

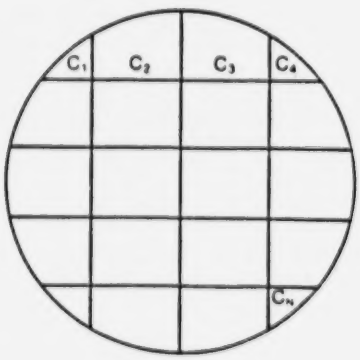
obtained by a sampling of farms and then aggregated by region rather than by county. Using this data to make estimates is, at best, risky. Our preliminary research of migrant sources in Florida indicates that the migrant counts reported by the ETA 223 are estimates and not verifiable through other means. It was, therefore, determined impractical to proceed with any comparative analysis between this data source and clinic registrations.

E. Development of an Alternate Methodology

In view of the insufficiency of the ETA 223, health clinic and MSRT data as a basis for developing a workable estimate of the MSFW population, it became evident that a methodology utilizing data from other sources would have to be found. A number of weeks were spent telephoning persons interested in migrants and seasonal farmworkers to locate additional sources of data that could be used to develop an estimating procedure and, almost without exception, the above sources that we had dispensed with as being unreliable were suggested.

We decided that a practical and theoretically sound model could be developed using Census of Agriculture data supplemented by regionally acquired parameters. An estimate based on this type model would give an upper limit to the number of workers during a harvest season which could then be divided into high and low impact areas.

The model is based on the fact that each area of interest can be subdivided into specific crop acreage, where C_1 represents the acreage of crop one, C_2 of crop two,... and C_n of crop n. This is represented below.



Each crop has four production components that potentially utilize human labor:

- Planting
- Crop Maintenance
- Crop Harvesting
- Crop Processing

At each of these production stages either human and/or mechanical labor is utilized. To perform these functions labor is drawn from family members, permanently hired farmworkers, seasonal farmworkers or migrant farmworkers. Usually the decision is based on the size of the farm, the skill needed to complete the task, the intensiveness of the harvest season and the availability of workers to do the job.

Because planting, crop maintenance and processing are usually mechanically performed, family members and permanently hired farmworkers perform these tasks. There are, however, exceptions. Stoop labor, using migrants and seasonal farmworkers, is generally used to harvest vegetables, fruit and berry and nut crops. Once again, there are exceptions. Also harvesting of most grain crops, e.g., wheat, soybeans, etc., is done mechanically and requires few migrants or seasonal farmworkers. So, it is estimated that more than 90% of migrants and seasonal farmworkers are used only to do harvesting.

To estimate the maximum number of farmworkers to produce crop C_1, the formula is:

$$(1) \qquad E_{C_1} = (P_{C_1}) + (M_{C_1}) + (H_{C_1}) + (PR_{C_1})$$

Where, E_{C_1} = Estimate of the maximum number of farmworkers needed to produce crop C_1

P_{C_1} = Number of workers needed to plant crop C_1

M_{C_1} = Number of workers needed to maintain crop C_1

H_{C_1} = Number of workers needed to harvest crop C_1

PR_{C_1} = Number of workers needed to process crop C_1

Since the majority of migrants and seasonal farmworkers needed are for harvesting, the values for the other three components can be considered zero and dropped from the algorithm, thus giving:

$$(2) \qquad E_{C_1} = H_{C_1}$$

and the number of workers in any one area becomes:

$$(3) \qquad E = \sum_{i=1}^{\text{all crops}} E_{C_i}$$

To estimate the number of workers needed for the harvest of a particular crop, one needs:

- The number of acres of the crop existing in the area,
- Person-hours needed to produce one acre of the crop,
- The beginning and end of the harvest season and
- The average number of hours worked per day by one worker to harvest the crop.

Estimates for all of these factors have been derived area-wide [4] [5] [6], but can be refined for a particular area by doing a one-time area-wide survey.

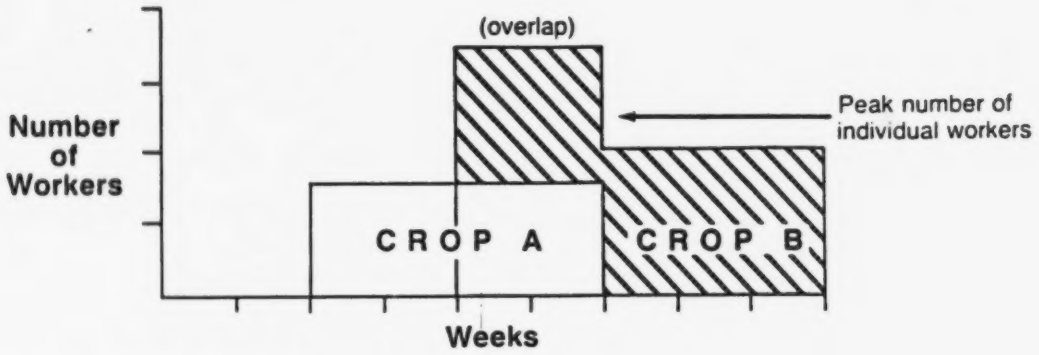
Substituting these factors for E_{C_1} in the algorithm gives the following:

$$(4) \qquad E = \sum_{i=1}^{\text{all crops}} \frac{A_i P_i}{H_i D_i}$$

Where A_i = Number of acres planted for crop 'i'
P_i = Hours needed to harvest one acre of crop 'i'
H_i = Average daily number of hours worked by worker
D_i = Number of days in harvest season

This will give an estimate of the maximum number of farmworkers needed to harvest crops in a particular area.

Some harvest seasons in a particular area are not mutually exclusive, that is, they occur at the same time. If the harvest of two different crops overlap, then demand for workers is added during the overlap period, again assuming individuals work from start to finish for each harvest. This is illustrated below:



To determine the maximum number of migrants or seasonal farmworkers in a particular area at any one time, one takes the harvest dates, and for all days during the year assigns the number of workers required for all crops being harvested on that day. For example, if on July 6, tomatoes, squash and sweet corn are being harvested, and 330, 1,015 and 62 workers are respectively needed to harvest these crops, then 330 + 1,015 + 62, or 1,407 workers are needed on July 6. Making this calculation for each day of the year, yields the maximum number of workers needed at any one time. This number has implications regarding the provision of various types of health and social services.

After the total number of farmworkers is determined, one needs to be able to break down this number into migrants, seasonal farmworkers, permanent farmworkers and family members. If one drops out all farms that employ five or less workers, then those farms using family members are not used in the computation. Also, those workers performing functions such as planting,

maintenance and processing are not included in the estimate since they are, more than likely, not migrants or seasonal farmworkers.

Another necessary determination is how many of the estimated farmworkers are migrants and how many are seasonal. This varies from area to area. The ratio of migrants to seasonal farmworkers is much higher in the upstream areas than the downstream areas. Table 2 shows estimates derived from two sources.[2] [3] One only needs to multiply the number of farmworkers needed by this factor to produce the number of migrants. For example, we estimate that 698 farmworkers are needed to harvest crops in Cochise County Arizona and that 27% of the farmworkers in that county are migrants. Therefore, .27 x 698, or 188, of the farmworkers in that county are migrants.

TABLE 2. Percent of Farmworkers That Are Migrant By State*

State	Percent Migrant	State	Percent Migrant
Alabama	43	Missouri	2
Arizona	54	Mississippi	40
Arkansas	38	New Hampshire	31
California	25	New Jersey	74
Colorado	66	New Mexico	11
Connecticut	31	New York	76
Delaware	18	Nevada	60
Florida	35	North Carolina	50
Georgia	55	Ohio	64
Idaho	60	Oklahoma	56
Illinois	84	Oregon	24
Indiana	40	Pennsylvania	74
Iowa	14	South Carolina	33
Kansas	66	Tennessee	5
Kentucky	10	Texas	53
Louisiana	52	Utah	56
Maine	31	Virginia	13
Maryland	40	Washington	24
Massachusetts	31	West Virginia	6
Michigan	89	Wisconsin	95
Missouri	2	Wyoming	29

Note: This table includes only the 42 states that produce substantial farm products.

To use the crop data method to estimate the number of persons needed to harvest 4793 acres of apples in Columbia County, New York, where it takes one man 63 hours to harvest one acre, the harvest season is 64 days, and a person works 8 hours per day on the average:[9]

$$\text{Workers needed} = \frac{(4793)\ 63)}{(8)\ (64)} = 590$$

If the county produces other crops, e.g. potatoes, the same formula can be used to estimate the number of workers needed, understanding that the parameters would, more than likely, change from one crop to another. If more than one type of crop is harvested at the same time, or if an estimate for the total number of workers is needed for the entire year, the numbers obtained from the separate crop estimates must be added. This estimate will give the total number of migrants or seasonal farmworkers who come into an area during harvest seasons over the course of a year.

Table 3 gives labor hours needed to harvest one acre and length of harvest season for a number of crops that are grown and harvested in Maryland.

Table 3. Crops, Labor Hours to Harvest One Acre And Length of Harvest Season: Maryland

Crop	Labor Hours to Harvest One Acre	Length of Harvest Season
1. Snapbeans	154	6 wks (July, August)
2. Broccoli	71	16 wks (June, July, Sept., Oct.)
3. Early Cabbage	81	8 wks (July, August)
4. Late Cabbage	90	10 wks (September, November)
5. Early Cauliflower	69	4 wks (July)
6. Late Cauliflower	79	6 wks (September, October)
7. Tomatoes	137	8 wks (August, September)
8. Apples	63	8 wks (September, October)
9. Sweet Corn	30	8 wks (July, August)
10. Cucumbers	43	6 wks (August, September)
11. Pumpkins	16	4 wks (October, November)
12. Cantaloupes	30	8 wks (July, August)
13. Green Peppers	58	6 wks (August, September)
14. Strawberries	361	8 wks (May, June)
15. Squash	23	8 wks (September, October)
16. Potatoes	9	8 wks (August, September)
17. Cherries	41	6 wks (August, September)
18. Peaches	82	6 wks (July, August)
19. Pears	45	5 wks (August, September)

Using these production data, an estimate of MSFWs can be obtained. By taking acreage data from the 1982 Census of Agriculture publications[7] using the estimate that one worker spends approximately eight hours per day on the job, an upper limit estimate for the number of workers needed to harvest the crops for the area can be computed. Table 4 gives estimates for eight counties located on the Maryland Eastern Shore.

Table 4. Acreage and Number of Workers Required to Harvest Crops: Maryland and Eastern Shore, 1982

County	Cantaloupes	Carrots	Pickles or Cucumbers	Watermelons	Squash	Green Peas	Sweet Corn	Tomatoes
Caroline	438 (27)	240 (8)	600 (108)	232 (19)	—	433 (190)	1239 (103)	438 (27)
Dorchester	130 (8)	—	707 (127)	844 (70)	—	98 (42)	1211 (101)	1356 (387)
Kent	—	—	—	—	—	—	1452 (121)	352 (100)
Queen Anne	—	—	—	—	163 (8)	463 (198)	1291 (108)	111 (32)
Somerset	—	—	169 (30)	—	—	—	—	—
Talbot	—	—	—	—	—	—	552 (46)	996 (284)
Wicomico	374 (28)	—	513 (92)	1076 (90)	—	32 (14)	507 (42)	286 (82)
Worcester	—	—	—	—	—	—	—	—

County	Peaches	Strawberries	Snapbeans	Green Lima Beans	Potatoes	Sweet Potatoes	Total (Persons Needed)
Caroline	—	54 (41)	720 (308)	824 (267)	—	—	(1309)
Dorchester	—	—	101 (43)	—	—	—	(778)
Kent	—	—	—	—	—	—	(221)
Queen Anne	—	—	—	326 (139)	—	—	(485)
Somerset	55 (10)	—	182 (78)	—	—	—	(402)
Talbot	—	—	—	—	—	—	(172)
Wicomico	—	36 (27)	193 (83)	17 (7)	—	—	(465)
Worcester	—	—	30 (13)	—	777 (19)	830 (21)	(183)
						TOTAL	4015

Note: Figures in parentheses are numbers of workers required.

To obtain a complete estimate of the migrant population, the number of non-productive accompanying family members must be added. In Maryland, where a variety of different ethnic groups were working, the number of non-productive migrants was found to be 17.1% of the total migrant population. The maximum number of migrants should then be inflated by 17.1% to obtain a more precise number of migrants in a particular area.

1. Limitations

Most of the limitations of this model result from the accuracy of the estimates used.

- Size distribution of acreage plots: For many crops, harvest is partially mechanized, and the utilization of mechanical harvesters depends on the size of individual plantings. If there are a few large farms, manual harvest is minimized and if there are many small farms, vice verse. Thus, the size distribution of total acreage influences the actual demand for person-hours per acre. (A)

- Harvest durations * are approximate, and since crops do not ripen uniformly, there is a phase-in and phase-out of demand. Our estimate assumes full utilization of workers from start to stop in a fixed harvest period, and thus ignores the actual demand changes during the intra-harvest interval. (D)

- Worker output varies with location, climate, population mix (number and age of working children), etc. (P)

Therefore from a mathematical point of view, all the quantities in the equation below, including acreage (A), are random variables. We do not know their distribution, but have the estimates of their means. In other words, we imply that:

$$E\left[\frac{A \times P}{H \times D}\right] = \frac{E(A)\ E(P)}{E(H)\ E(D)}$$

which is virtually never true of random variables having ordinary probability density functions that occur in common experience. However, since we do not know the distributions of A, H, P and D, additional work is needed to determine the sort of error introduced by substituting the right hand function for the true expressions on the left.

2. Advantages of Model

The model is theoretically sound, gives constant results, is easy to understand and use and makes use of data already available. In addition,

small area estimates can be obtained, results are not affected by immigration status and error sources are predictable.

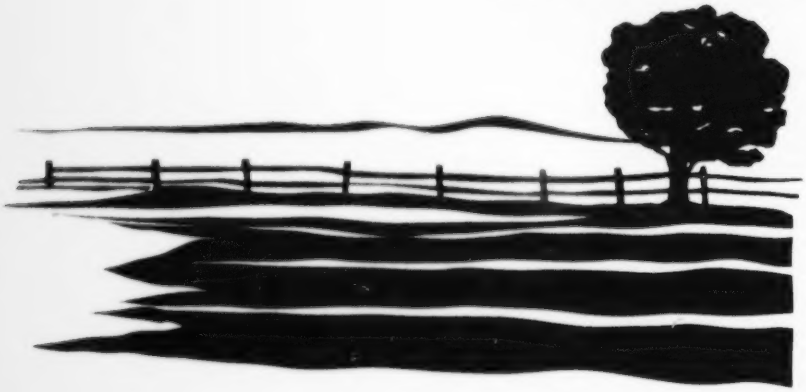
3. Disadvantages

While the model does not primarily produce demographics, e.g., age, sex, etc., these can be obtained as a by-product. Other potential handicaps could be caused by outdated crop data or environmental conditions which might affect crop production.

IV. Conclusion

Methodology for Designating High Impact

Migrant and Seasonal Agricultural Areas



IV. CONCLUSION

After visiting and collecting information on migrants in Maryland, Ohio and Florida and contacting officials who collect, process, and disseminate such data, it is clear that the only available data of known quality and precision on which to base estimates are the Census of Agriculture data, supplemented by special survey data. The model that was developed makes use of this data and is based on certain assumptions:

- Crop acreage data that make use of MSFWs do not vary significantly from year to year.
- Crops that use less than five workers in a area for harvesting employ family members who are not members of the MSFW workforce.
- The ratio of migrants to seasonal farmworkers is known and varies from area to area.
- Non-productive accompanying family members, i.e., non-workers, vary from one ethnic group to another, but are, on the average, approximately 17% of the migrant population. Therefore, they must be included in the number of workers for a more accurate estimate.
- Major grain crops, e.g,. wheat, soybeans, etc., are mechanically harvested and use negligible numbers of MSFWs.

These assumptions seem reasonable in light of what data are available.

The completeness of ETA 223 data varies so much from one area to another that one must survey each small area to determine what factor to use to adjust this data if reliable estimates are to be made.

Even this may vary from year to year. ETA 223 is, however, the most widely available data on migrants and the various bureaus that use this data

should work toward the goal of making it more complete, reliable and consistent. If this is achieved, then this data will be very useful.

Data collected by health clinics and education programs for migrants are less useful for estimating populations than ETA 223 data since there are so many variables such as season, ethnicity, type of crop harvested, etc., which all affect the number of people reported. To use these data results from each area, data must be reviewed separately.

Finally, OMH should work with regional area consultants to develop the materials and resources to permit them to make estimates for their area. A manual follows that will assist in this task.

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Appendix I

Methodology for Designating High Impact

Migrant and Seasonal Agricultural Areas

INTRODUCTION

The following is a description of the methodology which has been designed to estimate the migrant and seasonal farmworker population on a county-by-county or other defined area basis. Implementation of this methodology requires collection of agricultural data from a number of sources. The information gathered will determine the size of the migrant farmworker component in the overall framework of the agricultural labor force. Development of this estimate will depend on obtaining information from organizations and publications that are usually accessible to the general public.

This method presupposes four important factors. The first is that crop acreage does not vary significantly from year to year. This means that crop acreage data collected two or three years prior to the year of interest are valid when making estimate of the MSFW population. Even if the acreage is off by up to 10%, a good estimate can be obtained.

The second assumption is that in an area where a variety of farm crops, such as vegetables, fruits, berries and nuts are grown, the ratio of seasonal farmworkers to migrant workers varies, but a good estimate is obtainable. If there is a need to distinguish between these two types of workers, then the ratio should be applied to the total number of farmworkers needed to get this breakdown.

The third is that crops that require less than five workers to harvest will not be considered in the data base. Farms that use only family members to harvest crops are also dropped from the data base. Also, for activities other than harvesting e.g., planting, maintenance and processing, weeding, etc., most of the workers needed will be either family members or local farm workers. These workers are not included in the estimate.

The fourth assumption is that non-productive family members accompanying migrant workers are estimatable and are approximately 17% of the working force.

All of these assumptions seem reasonable and necessary to make the estimates. If one is at variance with the situation in a particular area, then the estimate can be adjusted accordingly.

PROCEDURES

Step 1 - Determining Area of Interest

The first step in determining population estimates is to define the area of interest. This might be a county or a group of counties. Usually the smallest area for which agricultural data are available is a county. County-by-county estimates produce the most accurate estimates. One can then aggregate contiguous counties to produce estimates for the area in question. The most important point here is to decide on an area that is of interest and for which crop data are available.

Step 2 - Acquiring Agricultural Crop Data

To obtain crop data, acquire a copy of the Census of Agriculture from the U.S. Government Printing Office, Washington, D.C. for the state in which the area is located, or call the state's Department of Agriculture to determine if it publishes comparable information. It is important to obtain the most up-to-date and complete information possible. If there is disagreement between the data from the two sources, the state's agricultural representative should be consulted to make a determination on the relative accuracy of the two sources.

The Census of Agriculture is available in most libraries that serve as repositories of government documents. If the Census of Agriculture is not available in your local public library, write Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. These volumes range from $7 to $10, depending on the size of the state's agricultural production. The Superintendent of Documents' order number is C3.31/4,98/v.1, plus the name of the state.

Chapter Two of the Census of Agriculture volume includes five tables that indicate which crops are significant in the different counties. The data in Table 25, (Cotton, Tobacco, Soybeans, Dry Beans, Peas, Potatoes, Sugar Crops and Peanuts), Table 27, (Vegetables, Sweet Corn and Melons Harvested for Sale), Table 28, (Fruits and Nuts), Table 29, (Berries Harvested for Sale) and Table 30, (Nursery and Greenhouse Products, Mushrooms and Sod Grown for Sale) include acreage information broken down by type of crop and county. Reproduced below is a section of Table 27 for the State of Utah:

Vegetables, Sweet Corn, and Melons Harvested for Sale: 1982 and 1978*

		Harvested		Irrigated	
Geographic Area	Year	Farms	Acres	Farms	Acres
DRY ONIONS					
State Total					
Utah	1982	78	1,820	78	1,820
	1978	96	2,099	96	2,099
Counties, 1982					
Box Elder		16	440	16	440
Davis		37	1,183	37	1,183
Salt Lake		8	37	8	37
Weber		14	148	14	148
All other counties		3	12	3	12
SNAP BEANS					
State Total					
Utah	1982	106	1,745	106	1,745
	1978	85	1,758	85	1,758
Counties, 1982					
Box Elder		33	630	33	630
Cache		12	348	12	348
Davis		33	673	33	673
Salt Lake		9	5	9	5
Utah		9	12	9	12
Weber		4	76	4	12
All other counties		6	1	6	1

* Source: 1982 Census of Agriculture Volume One, Geographic Areas Series, State and County Data, Utah, U.S. Government Printing Office 1983, Washington, D.C., pp. 218-219.

Crops that are almost totally harvested by machine, such as wheat, cotton, soybeans, dry beans and peas are not to be considered since the amount of manual labor required to harvest these crops is minimal.

Step 3 - Determining Labor-Intensive Crops

Labor-intensive crops are by definition those that require manual labor, not machines, to harvest. Wheat and soybeans do not fit this definition. Certain crops may be considered labor-intensive in some areas while in other areas they may be harvested by machine. Questions regarding the determination of labor-intensive crops should be referred to the Agricultural Extension Service or County Agricultural Extension Agent. The Census of Agriculture publication should be used to check which of the potential crops are labor intensive.

County Agents are generally listed in the white pages of the telephone book with the heading, Cooperative Extension Service under the county government.

Another source of information is the County Agents Directory, the annual reference directory for agricultural extension workers, costs $18.95 per copy. It is indispensible because it includes the names and phone numbers of useful sources of information about agriculture at the local, state and county level. The County Agents Directory is available from Century Communications, Inc., S520-G Toughy Avenue, Skokie, IL 60077.

Step 4 - Acquiring Person-Hour per Acre Statistics for the Significant Labor-Intensive Crops

Once the significant labor-intensive crops have been identified, the next step is to acquire information on the number of person-hours needed to harvest one acre of each of the crops on your list. This figure usually does not vary from state-to-state. (For a list of major crops for which

this data has been acquired, see Table 3, page 34, of the preceeding report.) The state Department of Agriculture's crop reporting division or the state land grant university's agriculture department are additional sources for this information. Person-hour statistics are often included in studies called Crop Budget Reports. These records detail amounts of labor and capital needed to produce a crop. An example of this procedure follows:

> A clinic located in Oceana County, Michigan needs to know person-hour statistics for asparagus. Agriculture census data show that 9,496 acres of asparagus were harvested there in 1982. The individual responsible for estimating migrants in Oceana County should contact the Cooperative Extension Service at Michigan State University. They have prepared a report called "Costs of Asparagus Production in Western Michigan." The publication includes a table on variable harvest costs for one acre of asparagus in Western Michigan in 1979. It states that 34 hours of labor are needed to harvest one acre of asparagus.

Step 5 - Determining the Length of the Harvest Season

This is necessary to determine the number of workers needed. A farm of 100 acres would require fewer workers if the harvest season was of six months duration than if it was of one month duration. However, the person-hours required would be the same.

The U.S. Department of Agriculture has produced three handbooks giving harvest dates for most crops grown in the U.S. Handbook No. 283 gives harvest dates for field and seed crops; Handbook No. 507 gives harvest dates for fresh market and processing vegetables; and Handbook No. 186 gives harvest dats for fruits and nuts. These three handbooks can be purchased from the U.S. Government Printing Office and should be sufficient sources for harvest season data.

Harvest data can be obtained from the same sources which provide information on labor requirements, or can be obtained from the U.S. Government publication on harvest seasons given above.

Note: It is estimated that, on the average, a migrant works eight hours per day for six of the seven days in a week. This estimate takes into consideration inclimate weather and illness.

Step 6 - Calculating the Number of Workers Needed to Harvest the Crops

To determine the number of workers needed to harvest labor intensive crops one needs to set up a worksheet. The form should be as follows:

Crops	Acres (A)	Hrs Needed to Harvest One Acre (B)	AxB (C)	Average Hrs. Worked Per Day (D)	Days in Harvest Season (E)	DxE (F)	Manpower Needed C÷F
Snapbeans	630	154	97,020	8	42	336	289

The illustration above shows the data and steps needed to calculate the manpower required to harvest 630 acres of snapbeans in a county.

The procedure involves:

- Multiplying the number of acres in the snapbean harvest (630) by the number of labor hours needed to harvest one acre of snapbeans (154) = 97,020;
- Multiplying the number of hours that an average harvest worker puts in per day (8) by the number of days in the snapbean harvest season (42) = 336;
- Dividing the results of (1) by the results of (2). This will give the number of workers needed to harvest the snapbean crop in the area.

This same procedure should be followed to determine workers needed for other crops in the area. After this has been done for all crops in the area, add the numbers in the last column of the worksheet to get the total number of workers needed. For example, if 289 workers were needed to harvest snapbeans, 100 to harvest peas and 50 to harvest watermelons, then 289 + 100 + 50 = 439 workers are needed in the area.

Step 7 - Dividing the Total Number of Workers Needed Into Migrants and Seasonal Farmworkers

Results from information gathered in Maryland and Ohio indicate that when a variety of crops are harvested, the average proportion of the total workers needed who are migrants is 40%. Table 3 gives estimates for other areas. If there is reason to believe that this is not true in a particular area, then a small survey or historical information can be used to get an estimate. This estimate should be multiplied by the total number obtained in Step 5 for the number of migrants. For example, if the total number of workers needed for harvesting is 420, then the working migrant population would be about 168 workers (420 x 40 = 168). The remainder, 252, will be seasonal farmworkers.

It has been estimated that, on the average, 17.1% of the total migrant workers should be added to adjust for non-working family members. This would then bring the migrant population to 195. In most cases the seasonal farmworker's family is already in the area, so they have already been counted into the population.

Step 8 - Determining Maximum Number of Workers Needed at Any One Time

To obtain this number, take the beginning and ending dates for all harvest seasons for all crops harvested in the area. For each day that harvesting takes place during the year, record the number of workers needed. Then add the number of workers needed for each day that harvesting takes place and select the day when the greatest number of workers are needed to represent the maximum number of workers needed.

The procedure involves:

- Multiplying the number of acres in the snapbean harvest (630) by the number of labor hours needed to harvest one acre of snapbeans (154) = 97020;
- Multiplying the number of hours that an average harvest worker puts in per day (8) by the number of days in the snapbean harvest season (42) = 336;
- Dividing the results of (1) by the results of (2). This will give the number of workers needed to harvest the snapbean crop in the area.

This same procedure should be followed to determine workers needed for other crops in the area. After this has been done for all crops in the area, add the numbers in the last column of the worksheet to get the total number of workers needed. For example, if 289 workers were needed to harvest snapbeans, 100 to harvest peas and 50 to harvest watermelons, then 289 + 100 + 50 = 439 workers are needed in the area.

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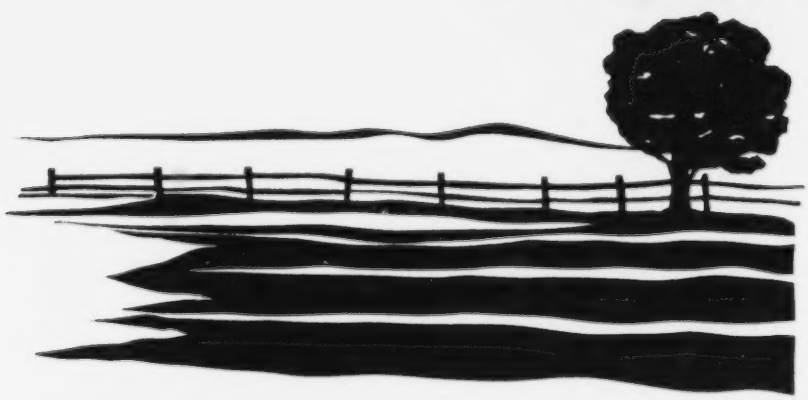
Appendix II

Methodology for Designating High Impact

Migrant and Seasonal Agricultural Areas



DEPARTMENT OF HEALTH & HUMAN SERVICES
BUREAU OF HEALTH CARE DELIVERY AND ASSISTANCE

Public Health Service

Health Resources and
Services Administration
Rockville MD 20857

Dear Colleague:

This is to reiterate the existence of an error in a publication commissioned by our office entitled "Methodology for Designating High Impact Migrant and Seasonal Agricultural Areas," HCR, June 29, 1985. This document was issued on April 2, 1986, as part of the Migrant Health Program Need/Demand Assessment Procedures. The error is on the State/County tables in Appendix II: the two columns indicating the number of seasonals and migrants needed have been transposed; the one entitled, Seasonal should be Migrants and vice versa.

During the need/demand assessment training workshops conducted by Ben Duggar and sponsored by our office, during the past 1 1/2 year, acknowledgment of this error was made.

We regret any inconvenience this situation might have caused you.

Sincerely yours,

Sonia M. Leon Reig

Sonia M. Leon Reig
Director
Migrant Health Program
Division of Primary Care Services

ESTIMATES OF FARMWORKERS NEED TO HARVEST CROPS BY STATE AND COUNTY

The following tables were produced using the model based on crop data on an IBM-PC programmed by HCR using BASICA. Estimates are given for 42 states that produce substantial farm products. Crop data were taken directly from the 1982 Census of Agriculture publications and the migrant and seasonal farmworker ratios were obtained from the Colorado Migrant Council's 1980 profile of the farmworker in the U.S. and the U.S. Department of Health and Human Services' 1980 Target Population Estimates for the 1978 Migrant Health Program. Hours needed to harvest one acre and the number of unproductive workers accompanying migrant farmworkers are from sources previously indicated. Crops used to obtain the estimate of the number of workers are also included for reference purposes. For these tables all farms were used regardless of the number of workers needed, so some counties will have estimates that are very small, i.e., less than 10.

Crops that are mechanically harvested e.g., wheat, soybeans, etc., are not included because it is assumed that the number of MSFWs needed is negligible. If a user of this data believes that the parameters used to make the estimates for their county are either too large or too small and will significantly affect the estimate, then a more valid estimate should be used. This estimate should, however, have some empirical basis, e.g., a sample survey, census, etc.

It should be noted that workers used to harvest products of nurseries, greenhouses and fisheries are not included. These numbers might be substantial in some areas.

The key preceding the table assigns each crop a numeric code and lists harvest hours per acre.

High-impact areas (over 4,000 farmworkers needed) are underlined.

TABLE LEGENDS

Total Number of Farmworkers Needed --

Total number of farmworkers needed to harvest crops in the county.

Maximum Number of Farmworkers Needed --

Maximum number of farmworkers needed on any one day during the harvest season given that more than one crop is harvested at the same time.

Maximum Number of Seasonal Workers Needed --

Maximum number of seasonal workers needed on any one day during the harvest season given that more than one crop is harvested at the same time.

Maximum Number of Migrant Workers Needed --

Maximum number of migrants workers needed on any one day during the harvest season given that more than one crop is harvested at the same time.

Maximum Migrants Plus Unproductive Dependents --

An estimate of the number of non-working dependents accompanying migrant workers is added to the maximum number of migrants needed.

HOURS REQUIRED TO HARVEST ONE ACRE OF A PARTICULAR CROP

CROP CODE	NAME OF CROP	HARVEST HOURS PER ACRE
1	Almonds	8
2	Apples	50
3	Apricots	72
4	Asparagus	150
5	Avocado	24
6	Broccoli	80
7	Blackberries	265
8	Cabbage	20
9	Cantaloupes	50
10	Carrots	129
11	Cauliflower	80
12	Celery	149
13	Cherries	158
14	Cranberries	0
15	Cucumbers	150
16	Eggplant	160
17	Garlic	0
18	Grapes	50
19	Greens	0
20	Green Limas	56
21	Green Peas	0
22	Green Peppers	200
23	Lemons	185
24	Lettuce	54
25	Melons	50
26	Nectarines	63
27	Olives	78
28	Onions	133
29	Oranges	71
30	Peaches	65
31	Peanuts	28
32	Pears	55
33	Pecans	15
34	Peppermint	0
35	Plums	48
36	Potatoes (White)	20
37	Prunes	45
38	Pumpkins	30
39	Snapbeans	73
40	Squash	40
41	Strawberries	200

CROP CODE	NAME OF CROP	HARVEST HOURS PER ACRE
42	Sugar Cane	92
43	Sweet Corn	30
44	Sweet Potatoes	200
45	Tangerines	55
46	Tobacco	322
47	Tomatoes	50
48	Walnuts	6
49	Watermelons	25
50	Green Onions	300
51	Parsley	40
52	Hot Peppers	400
53	Radishes	0
54	Turnips	80
55	Grapefruit	70
56	Pistachioes	0
57	Beets	200
58	Sweet Peppers	120
59	Rhubarb	0
60	Blueberries	265
61	Raspberries	325
62	Pimentos	0
63	Filberts	0
64	Boysenberries	265
65	Loganberries	265
66	Brussel Sprouts	150
67	Endive	75
68	Escarole	75
69	Kale	30
70	Okra	160
71	Mangoes	0
72	Tangelos	55
73	Dates	0
74	Figs	45
75	Kiwi	175
76	Persimmon	90
77	Pomegranates	25
78	Daikon	0
79	Watercress	0
80	Coffee	570
81	Guavas	135
82	Papayas	150
83	Macademia Nuts	60
84	Artichokes	60

NOTE: Crops with zero (0) harvest hours per arce are totally mechanically harvested.

Source: Brown, G.K., Harvest Mechanization Status for Horticultural Crops. ASAE Paper 80-1532, December, 1980.

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR ALABAMA

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
AUTAUGA	116	64	28	36	43
BALDWIN	2373	1472	633	839	982
BARBOUR	58	58	25	33	39
BLOUNT	534	423	182	241	282
BULLOCK	99	99	43	56	66
CALHOUN	31	28	12	16	19
CHAMBERS	34	21	9	12	14
CHEROKEE	13	7	3	4	5
CHILTON	11	11	5	6	7
CHOCTAW	834	780	335	445	520
CLARKE	9	7	3	4	5
CLEBURNE	24	11	5	6	7
CLAY	1	1	0	1	1
COFFEE	39	31	13	18	21
CONECUH	7	7	3	4	5
COOSA	7	7	3	4	5
COVINGTON	94	71	31	40	47
CRENSHAW	29	22	9	13	15
CULLMAN	4264	4083	1756	2327	2723
DALE	24	22	9	13	15
DALLAS	128	104	45	59	69
DE KALB	959	840	361	479	560
ELMORE	99	41	18	23	27
ESCAMBIA	109	83	36	47	55
ETOWAH	42	36	15	21	24
FRANKLIN	6	6	3	3	4
GENEVA	78	51	22	29	34
GREENE	5	3	1	2	2
HENRY	13	13	6	7	9
HOUSTON	75	38	16	22	25
JACKSON	438	417	179	238	278
JEFFERSON	35	15	6	9	10
LAUDERDALE	12	8	3	5	5
LAWRENCE	10	10	4	6	7
LEE	77	35	15	20	23
LIMESTONE	73	58	25	33	39
LOWNDES	13	13	6	7	9
MACON	71	58	25	33	39
MADISON	26	16	7	9	11
MARION	4	4	2	2	3
MARENGO	11	9	4	5	6
MARSHALL	13	12	5	7	8
MOBILE	553	283	122	161	189
MONROE	26	26	11	15	17
MORGAN	48	41	18	23	27

MONTGOMERY	52	47	20	27	31
PERRY	77	69	30	39	46
PICKENS	23	23	10	13	15
PIKE	62	51	22	29	34
RANDOLPH	6	6	3	3	4
RUSSELL	61	51	22	29	34
SHELBY	12	7	3	4	5
ST CLAIR	99	99	43	56	66
SUMTER	16	16	7	9	11
TALLAPOOSA	19	15	6	9	10
TALLADEGA	16	9	4	5	6
TUSCALOOSA	256	249	107	142	166
WALKER	68	39	17	22	26
WASHINGTON	14	12	5	7	8

COUNTY	CROPS USED TO ESTIMATE MIGRANT WORKERS
AUTAUGA	20 39 9 21 43 49 30 33
BALDWIN	36 44 19 21 40 47 19 49 18 33
BARBOUR	33
BLOUNT	21 15 70 58 40 43 47 49 2 30 35
BULLOCK	33
CALHOUN	49 33
CHAMBERS	43 49 2 30 33
CHEROKEE	21 2 33
CHILTON	30
CHOCTAW	9 19 21 70 40 43 47 49 2 30 35 33
CLARKE	49 33
CLEBURNE	21 49 33 2
CLAY	33
COFFEE	39 21 33
CONECUH	33
COOSA	2
COVINGTON	21 49 30 33
CRENSHAW	21 49 33
CULLMAN	36 44 9 19 21 58 38 43 19 49 2 30 33
DALE	21 33
DALLAS	44 21 49 33
DE KALB	36 52 62 43 49 2 30
ELMORE	20 21 70 40 43 47 49 30 33
ESCAMBIA	36 49 33 60
ETOWAH	58 40 43 19 49 30 33
FRANKLIN	30
GENEVA	21 43 47 49 33
GREENE	49 33
HENRY	33
HOUSTON	20 21 47 49 33
JACKSON	36 49 30 33
JEFFERSON	21 70 49 30 33
LAUDERDALE	36 49
LAWRENCE	30
LEE	20 21 43 49 2 30 33
LIMESTONE	15 62 2 30
LOWNDES	33
MACON	44 33
MADISON	58 62 43 33
MARION	49
MARENGO	43 33
MARSHALL	36 49 33
MOBILE	36 20 39 21 70 43 47 49 33
MONROE	33
MORGAN	62 49 2 30 33
MONTGOMERY	21 49 33
PERRY	70 49 33
PICKENS	30
PIKE	21 49 33
RANDOLPH	2
RUSSELL	21 43 33
SHELBY	2 30
ST CLAIR	47 49

SUMTER	33					
TALLAPOOSA	2	33				
TALLADEGA	43	2				
TUSCALOOSA	44	21	49	33		
WALKER	20	39	9	21	49	2
WASHINGTON	49	33				

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR ARKANSAS

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
ASHLEY	7	7	3	4	5
BENTON	499	469	178	291	340
BOONE	7	4	2	2	3
BRADLEY	97	97	37	60	70
CALHOUN	2	2	1	1	1
CARROLL	28	28	11	17	20
CHICOT	7	7	3	4	5
CLARK	2	2	1	1	1
CLEBURNE	3	3	1	2	2
CLAY	22	22	8	14	16
CONWAY	2	2	1	1	1
CRAWFORD	91	85	32	53	62
CRAIGHEAD	32	30	11	19	22
CROSS	43	41	16	25	30
CRITTENDON	5	5	2	3	4
DESHA	6	6	2	4	4
DREW	11	11	4	7	8
FAULKNER	9	5	2	3	4
FRANKLIN	83	83	32	51	60
GRANT	1	1	0	1	1
HOT SPRING	6	4	2	2	3
HOWARD	38	38	14	24	28
INDEPENDENCE	13	13	5	8	9
JEFFERSON	17	9	3	6	7
JOHNSON	123	109	41	68	79
LAFAYETTE	6	6	2	4	4
LAWRENCE	18	14	5	9	10
LEE	23	23	9	14	17
LINCOLN	3	3	1	2	2
LITTLE RIVER	124	123	47	76	89
LOGAN	2	2	1	1	1
LONOKE	32	19	7	12	14
MADISON	6	6	2	4	4
MARION	13	13	5	8	9
MILLER	19	19	7	12	14
MISSISSIPPI	49	36	14	22	26
MONTGOMERY	3	3	1	2	2
NEVADA	12	12	5	7	9
NEWTON	3	3	1	2	2
PHILLIPS	37	37	14	23	27
PIKE	7	6	2	4	4
POPE	26	20	8	12	15
PULASKI	28	17	6	11	12
SALINE	7	6	2	4	4
SEARCY	3	3	1	2	2

SEBASTIAN	20	19	7	12	14
SEVIER	8	4	2	2	3
ST FRANCIS	93	85	32	53	62
STONE	3	3	1	2	2
WASHINGTON	226	215	82	133	156
WHITE	15	11	4	7	8
YELL	3	3	1	2	2
GREENE	7	7	3	4	5
HEMPSTEAD	10	10	4	6	7
SHARPE	4	4	2	2	3
UNION	2	2	1	1	1
WOODRUFF	4	4	2	2	3

COUNTY	CROPS USED TO ESTIMATE MIGRANT WORKERS
ASHLEY	47
BENTON	20 2 18 30
BOONE	2 30
BRADLEY	15 47 49
CALHOUN	21
CARROLL	2
CHICOT	33
CLARK	33
CLEBURNE	2
CLAY	30 49
CONWAY	18
CRAWFORD	20 9 21 15 52 40 43 47 19 49 2 30 49
CRAIGHEAD	9 43 33 49
CROSS	30 33
CRITTENDON	33
DESHA	33
DREW	47
FAULKNER	2 30
FRANKLIN	40 18
GRANT	21
HOT SPRING	30 33
HOWARD	30
INDEPENDENCE	30
JEFFERSON	20 43 33
JOHNSON	40 2 18 30
LAFAYETTE	21
LAWRENCE	33 49
LEE	30
LINCOLN	33
LITTLE RIVER	33 49
LOGAN	33
LONOKE	21 33 49
MADISON	2
MARION	2 49
MILLER	33
MISSISSIPPI	9 33 49
MONTGOMERY	2
NEVADA	21 49
NEWTON	2
PHILLIPS	33
PIKE	30 33
POPE	2 30
PULASKI	2 30 33 49
SALINE	21 2 49
SEARCY	2
SEBASTIAN	49 33 49
SEVIER	30 33
ST FRANCIS	2 30
STONE	2
WASHINGTON	2 18 30
WHITE	70 40 2 30 49
YELL	33
GREENE	49

HEMPSTEAD	49
SHARPE	49
UNION	49
WOODRUFF	49

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR ARIZONA

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
APACHE	56	56	26	30	35
COCHISE	698	426	196	230	269
COCONINO	40	34	16	18	21
GILA	5	5	2	3	3
GRAHAM	3	3	1	2	2
GREENLEE	3	3	1	2	2
MARICOPA	13353	6330	2912	3418	3999
MOHAVE	6	6	3	3	4
NAVAJO	12	12	6	6	8
PIMA	104	104	48	56	66
PINAL	1218	614	282	332	388
SANTA CRUZ	11	11	5	6	7
YAVAPAI	28	16	7	9	10
YUMA	18328	13684	6295	7389	8646

COUNTY	CROPS USED TO ESTIMATE MIGRANT WORKERS
APACHE	43
COCHISE	24 28 52 22 38 43 49 2 2 33 56
COCONINO	40 43 49
GILA	33
GRAHAM	2 33
GREENLEE	49
MARICOPA	36 6 8 9 10 11 19 24 19 28 50 51 53 19 43 54 49 3 18 35 55 23 29 45 45 33 56
MOHAVE	2 33
NAVAJO	40 49
PIMA	24 56
PINAL	49 55 33 56 29 23
SANTA CRUZ	18
YAVAPAI	43 2 18 33
YUMA	9 25 24 49 55 23 29 45 33 56

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR CALIFORNIA

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
ALAMEDA	329	287	72	215	252
AMADOR	224	224	56	168	197
BUTTE	4980	2622	656	1967	2301
CALAVERAS	43	43	11	32	38
COLUSA	3290	1936	484	1452	1699
CONTRA COSTA	1989	1125	281	844	987
EL DORADO	577	544	136	408	477
FRESNO	55580	31130	7780	23350	27320
GLENN	2035	1141	285	856	1001
HUMBOLDT	19	19	5	14	17
IMPERIAL	7350	5160	1290	3870	4530
KERN	37130	16120	4030	12090	14150
KINGS	6570	4766	1192	3575	4182
LAKE	2409	2055	514	1541	1803
LOS ANGELES	758	357	89	268	313
MADERA	21193	10707	2677	8030	9395
MARIN	90	90	23	68	79
MENDOCINO	2442	2423	606	1817	2126
MERCED	17677	6100	1525	4575	5353
MODOC	109	109	27	82	96
MONTEREY	23260	8843	2211	6632	7760
NAPA	3786	3758	940	2819	3298
NEVADA	17	17	4	13	15
ORANGE	2471	1429	357	1072	1254
PLACER	571	414	104	311	363
RIVERSIDE	12731	7440	1860	5580	6529
SANTA BARBARA	1725	1105	276	829	970
SAN BERNADINO	6965	3200	800	2400	2808
SANTA CLARA	3368	1804	451	1353	1583
SAN DIEGO	5084	3647	912	2735	3200
SAN BENITO	1700	1306	327	980	1146
SAN JOAQUIN	28896	12408	3102	9306	10888
SAN LUIS OBISPO	3203	1432	358	1074	1257
SAN MATEO	178	131	33	98	115
SANTA CRUZ	1934	895	224	671	785
SACREMENTO	5377	2522	631	1892	2213
SHASTA	223	179	45	134	157
SIERRA	2	2	1	2	2
SISKIYOU	36	36	9	27	32
SOLANO	5556	3662	916	2747	3213
SONOMA	4999	4949	1237	3712	4343
STANISLAUS	14155	5529	1382	4147	4852
SUTTER	10551	5605	1401	4204	4918
TEHAMA	2589	1509	377	1132	1324
TRINITY	2129	2118	530	1589	1859

TULARE	31147	13292	3323	9969	11664
TOULUMNE	9	9	2	7	8
VENTURA	13786	8779	2195	6584	7704
YOLO	13559	11713	2928	8785	10278
YUBA	3912	3472	868	2604	3047

COUNTY	CROPS USED TO ESTIMATE MIGRANT WORKERS
ALAMEDA	43 3 18 48
AMADOR	18 48
BUTTE	49 2 3 18 75 27 30 32 35 29 45 33 57 48
CALAVERAS	2 18 48
COLUSA	40 47 49 3 18 35 48 28 40
CONTRA COSTA	43 47 3 13 18 26 30 32 57 48
EL DORADO	2 13 18 32 35 48
FRESNO	44 39 25 24 28 50 51 52 58 38 53 19 40 43 47 49 2 5 74 75 26 27 30 32 76 35 77 23 29 72 45 33 57 48 64 41
GLENN	3 18 27 30 35 29 33 48
HUMBOLDT	2 30
IMPERIAL	6 10 11 12 25 24 28 50 53 40 47 49 73 55 23 29 45 33
KERN	44 10 25 24 28 50 52 58 43 47 54 49 2 3 5 13 18 75 26 27 30 32 35 77 55 23 29 72 33 57 48
KINGS	24 28 3 18 26 30 35 77 57 48
LAKE	18 32 35 48
LOS ANGELES	19 24 28 38 40 43 47 49 2 3 13 18 26 30 32 35 55 23 29 57 48 41
MADERA	49 2 3 74 18 75 26 27 30 32 35 77 29 72 33 57 48
MARIN	2 18 48
MENDOCINO	43 49 2 13 18 32 35 48
MERCED	44 28 50 50 58 43 47 49 3 13 74 18 75 26 27 30 35 29 33 57 48
MODOC	28
MONTEREY	39 6 66 10 11 12 19 24 28 51 52 58 19 40 43 47 2 3 5 18 48 78 61 41
NAPA	2 18 32 35 48
NEVADA	2 18 48
ORANGE	39 11 12 24 58 40 43 47 5 55 23 29 41
PLACER	40 2 18 75 27 30 32 35 29 45 57 48
RIVERSIDE	39 6 10 11 25 24 28 70 51 52 58 53 19 40 43 47 49 2 3 5 13 73 18 75 26 27 30 35 55 23 29 72 45 57 48 41
SANTA BARBARA	39 24 47 2 5 18 23 29 48
SAN BERNADINO	6 10 11 12 24 28 58 38 19 40 43 47 2 3 5 13 18 55 23 33 57 48 41
SANTA CLARA	39 6 11 24 24 28 52 58 38 40 43 47 2 3 13 18 75 32 35 48 7 61 41
SAN DIEGO	39 11 12 24 52 58 40 43 47 49 2 3 5 74 18 75 27 32 76 35 55 23 23 29 72 45 33 48 41
SAN BENITO	6 24 28 40 43 2 3 13 35 23 48
SAN JOAQUIN	39 6 10 11 25 24 28 52 58 38 40 43 47 49 2 3 13 18 75 26 27 30 32 35 29 57 48 41
SAN LUIS OBISPO	39 6 10 11 12 24 52 58 40 47 2 3 5 18 75 77 23 29 57 48 61 41
SAN MATEO	39 24 38 19 2 18 48 7
SANTA CRUZ	39 6 66 11 12 24 40 43 47 2 3 5 18 32 76 35 48 41

SACREMENTO	53 40 43 47 2 13 18 75 27 32 35 23 33 57 48
SHASTA	40 2 18 75 27 33 57 48
SIERRA	2
SISKIYOU	28 2
SOLANO	58 38 43 47 2 3 13 18 75 30 32 35 48
SONOMA	40 43 47 2 13 18 75 32 35 48
STANISLAUS	44 39 11 28 58 38 19 40 43 47 49 2 3 13 18 75 26 30 32 35 29 33 57 48
SUTTER	38 40 47 49 13 18 75 30 32 35 48
TEHAMA	2 18 75 27 30 35 29 57 48
TRINITY	2
TULARE	39 6 11 28 52 19 40 43 47 49 2 3 5 13 74 18 75 26 27 30 32 76 35 77 55 23 29 72 45 33 57 48
TOULUMNE	2 48
VENTURA	39 6 11 12 24 51 52 58 38 19 40 43 47 3 5 18 75 55 23 23 29 48 61 41
YOLO	11 24 40 43 47 3 13 74 18 75 30 32 35 29 57 48
YUBA	13 18 75 27 30 35 48

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR COLORADO

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
ADAMS	206	206	136	70	82
BOULDER	11	11	7	4	4
DELTA	1268	851	562	289	339
FREMONT	29	29	19	10	12
LARIMER	200	200	132	68	80
MESA	502	352	232	120	140
MONTROSE	370	370	244	126	147
MORGAN	19	19	13	6	8
OTERO	877	696	459	237	277
PUEBLO	598	598	395	203	238
SAGAUCHE	44	44	29	15	18
WELD	1802	1697	1120	577	675
RIO GRANDE	19	19	13	6	8

COUNTY	CROPS USED TO ESTIMATE MIGRANT WORKERS
ADAMS	39 8 11 15 24 28 52 40
BOULDER	38
DELTA	28 2 13 30 32
FREMONT	2
LARIMER	39 13
MESA	28 2 3 13 18 30 32 47
MONTROSE	24 28
MORGAN	28
OTERO	9 15 47 49
PUEBLO	28 9 15 28 52 49
SAGAUCHE	24 21
WELD	4 39 3 10 15 24 28 50 52
RIO GRANDE	24

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR CONNECTICUT

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
FAIRFIELD	85	43	13	30	35
HARTFORD	2205	1560	484	1076	1259
LITCHFIELD	103	54	17	37	44
MIDDLESEX	35	23	7	16	19
NEW HAVEN	357	163	51	112	132
NEW LONDON	145	71	22	49	57
TOLLAND	1581	1526	473	1053	1232
WINDHAM	61	50	16	35	40

COUNTY	CROPS USED TO ESTIMATE MIGRANT WORKERS
FAIRFIELD	43 47 2 30 41
HARTFORD	36 8 9 11 15 16 24 58 38 19 40 43 47 54 2 30 32 41
LITCHFIELD	38 43 2 18 30
MIDDLESEX	43 2
NEW HAVEN	8 11 15 24 58 38 40 43 47 2 30 32 41
NEW LONDON	38 43 47 2 18 30 41
TOLLAND	36 11 43 2 30 41
WINDHAM	43 2 30

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR DELAWARE

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
KENT	2356	1491	596	895	1047
NEW CASTLE	80	80	32	48	56
SUSSEX	2277	1867	747	1120	1311

COUNTY	CROPS USED TO ESTIMATE MIGRANT WORKERS
KENT	36 4 39 9 10 11 15 21 52 22 43 47 49 30
NEW CASTLE	21 43 47
SUSSEX	20 39 9 10 21 43 47 49 30

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR FLORIDA

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
ALACHUA	1187	750	263	488	570
BAKER	46	27	9	18	21
BAY	10	10	4	7	8
BRADFORD	130	97	34	63	74
BREVARD	1489	1489	521	968	1132
BROWARD*	283	202	71	131	154
CALHOUN	29	29	10	19	22
CHARLOTTE	656	602	211	391	458
CITRUS	132	122	43	79	93
CLAY	17	17	6	11	13
COLLIER	3559	3064	1072	1992	2330
COLUMBIA	64	34	12	22	26
DADE*	4079	2766	968	1798	2104
DE SOTO	3134	2900	1015	1885	2205
DIXIE	41	41	14	27	31
DUVAL	18	11	4	7	8
ESCAMBIA	125	119	42	77	90
FLAGLER	80	80	28	52	61
GADSEN	212	112	39	73	85
GILCHRIST	243	188	66	122	143
GLADES	570	311	109	202	237
HAMILTON	615	604	211	393	459
HARDEE	4108	3772	1320	2452	2869
HENDRY	4594	1812	634	1178	1378
HERNANDO	596	596	209	387	453
HIGHLANDS	1163	1163	407	756	884
HILLSBOROUGH	10517	9087	3180	5907	6911
HOLMES	53	31	11	20	24
INDIAN RIVER	7957	7957	2785	5172	6051
JACKSON	160	133	47	86	101
JEFFERSON	456	340	119	221	259
LAFAYETTE	398	398	139	259	303
LAKE*	11378	11048	3867	7181	8402
LEE*	1500	1307	457	850	994
LEON	17	14	5	9	11
LEVY	196	171	60	111	130
MADISON	553	584	204	380	444
MANATEE*	2355	1868	654	1214	1421
MARION	1160	1010	354	657	768
MARTIN	3686	3686	1290	2396	2803
NASSAU	16	16	6	10	12
OKALOOSA	37	35	12	23	27
OKEECHOBEE	459	459	161	298	349
ORANGE*	1374	4091	1432	2659	3111
OSCEOLA	1689	1689	591	1098	1284

PALM BEACH*	19440	7930	2780	5150	6030
PASCO	2834	2762	967	1795	2101
PINELLAS	275	275	96	179	209
POLK	12551	12493	4373	8120	9501
PUTNAM	274	236	83	153	179
SANTA ROSA	72	66	23	43	50
SARASOTA	34	82	29	53	62
SEMINOLE	603	480	168	312	365
ST JOHNS	99	99	35	64	75
ST LUCIE	9746	9746	3411	6335	7412
SUMTER	528	507	177	330	386
SUWANNEE	1210	1066	373	693	811
TAYLOR	59	59	21	38	45
UNION	450	244	85	159	186
VOLUSIA*	1054	851	298	553	647
WASHINGTON	105	101	35	66	77
WALTON	29	19	7	12	14

* LARGE NUMBER OF NURSERY AND GREENHOUSE PRODUCTS, NO ESTIMATES AVAILABLE

COUNTY	CROPS USED TO ESTIMATE MIGRANT WORKERS
ALACHUA	46 60 39 9 21 15 16 70 21 58 40 43 49 29 33
BAKER	46 33
BAY	33
BRADFORD	19 19 49 33 41
BREVARD	72 29 73 45
BROWARD	16 41 43 47 72 29
CALHOUN	33
CHARLOTTE	15 49 72 29
CITRUS	49 72 29
CLAY	33
COLLIER	46 15 21 58 40 47 49 72 29
COLUMBIA	49 33
DADE	39 21 15 70 21 41 38 40 43 47 5 71 72 23 23 29 73
DE SOTO	9 15 49 72 29 73
DIXIE	46 40 49
DUVAL	18 60 33
ESCAMBIA	21 43 33
FLAGLER	8 15
GADSEN	46 39 40 47 49 18 33
GILCHRIST	46 15 58 49 33
GLADES	44 42
HAMILTON	46 49 33
HARDEE	15 40 49 72 29 73 45
HENDRY	44 42 15 58 40 47 49 72 23 29 45
HERNANDO	72 29 45
HIGHLANDS	72 73 45 45
HILLSBOROUGH	39 8 41 9 11 19 21 15 16 19 21 52 58 40 43 47 49 18 72 23 29 73 45 33
HOLMES	21 49 33
INDIAN RIVER	72 29 73 45
JACKSON	40 49 33
JEFFERSON	46 49 33
LAFAYETTE	46 49
LAKE	21 15 58 40 43 49 72 29 73 45 45
LEE	15 58 40 47 49 5 71 72 29
LEON	49 33
LEVY	46 15 40 49 33
MADISON	46 21 40 49 30 33
MANATEE	8 9 15 58 41 40 43 47 49 72 29 73 45
MARION	42 9 21 15 16 70 21 40 49 18 72 29 73 60 45 33
MARTIN	72 29 73
NASSAU	33 60
OKALOOSA	49 33
OKEECHOBEE	72 29
ORANGE	53 43 72 29 73 45 45
OSCEOLA	72 29 73 45 45
PALM BEACH	44 39 12 15 16 67 41 68 24 51 52 58 53 40 43 47 5 71 72 29 42
PASCO	21 49 41 72 29 73 45 45
PINELLAS	72 29

POLK	21 15 49 72 29 73 45 45
PUTNAM	8 72 29 45 60 33
SANTA ROSA	21 43 49 33
SARASOTA	43 72 29
SEMINOLE	8 15 58 40 72 29 73 45
ST JOHNS	8 29
ST LUCIE	72 29 73 45 45
SUMTER	46 9 15 16 58 40 47 49 29
SUWANNEE	46 19 21 15 49 33
TAYLOR	46
UNION	46 39 15 40 49 33
VOLUSIA	8 15 24 49 72 29 45
WASHINGTON	49 33
WALTON	49 33

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR GEORGIA

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
APPLING	2282	2194	1207	987	1155
ATKINSON	1294	1243	684	559	654
BACON	1659	1651	908	743	869
BAKER	42	28	15	13	15
BANKS	14	14	8	6	7
BARROW	12	7	4	3	4
BARTOW	21	17	9	8	9
BEN HILL	739	685	377	308	361
BERRIEN	3753	3647	2006	1641	1920
BIBB	96	56	31	25	29
BLECKLEY	26	26	14	12	14
BRANTLEY	847	831	457	374	438
BROOKS	523	265	146	119	140
BRYAN	262	262	144	118	138
BULLOCH	2682	2587	1423	1164	1362
BURKE	221	211	116	95	111
BUTTS	9	9	5	4	5
CALHOUN	393	393	216	177	207
CAMDEN	2	2	1	1	1
CANDLER	1004	971	534	437	511
CARROLL	6	6	3	3	3
CATOOSA	2	2	1	1	1
CHATHAM	223	218	120	98	115
CHEROKEE	10	10	6	5	5
CHATOOGA	5	5	3	2	3
CLARKE	2	2	1	1	1
CLINCH	155	149	82	67	78
CLAY	4	4	2	2	2
COBB	9	9	5	4	5
COFFEE	4386	4317	2374	1943	2273
COLQUIT	5324	5196	2858	2338	2736
COOK	3064	3015	1658	1357	1587
COWETA	31	24	13	11	13
CRISP	136	110	61	50	58
DAWSON	835	420	231	189	221
DECATUR	13	13	7	6	7
DODGE	374	255	140	115	134
DOOLY	305	286	157	129	151
DOUGHERTY	392	204	112	92	107
EARLY	1427	1390	765	626	732
ECHOLS	52	52	29	23	27
EFFINGHAM	400	395	217	178	208
ELBERT	302	295	162	133	155
EMANUEL	1	1	1	0	1
EVANS	1389	1313	722	591	691

FANNIN	845	811	446	365	427
FAYETTE	13	6	3	3	3
FORSYTH	11	11	6	5	6
FRANKLIN	43	40	22	18	21
FULTON	4	4	2	2	2
GILMER	215	215	118	97	113
GORDON	7	7	4	3	4
GRADY	1323	978	538	440	515
GWINNETT	12	9	5	4	5
HABERSHAM	46	46	25	21	24
HALL	12	12	7	5	6
HANCOCK	57	57	31	26	30
HARRIS	30	28	15	13	15
HENRY	13	11	6	5	6
HOUSTON	39	20	11	9	11
IRWIN	2113	2051	1128	923	1080
JACKSON	15	15	8	7	8
JEFFERSON	2033	1952	1074	878	1028
JENKINS	168	168	92	76	88
LANIER	1246	1246	685	561	656
LAURENS	243	239	131	108	126
LEE	31	31	17	14	16
LONG	173	173	95	78	91
LOWNDES	3169	3122	1717	1405	1644
LUMPKIN	11	11	6	5	6
MACON	138	129	71	58	68
MARION	31	31	17	14	16
MERIWETHER	13	13	7	6	7
MITCHELL	1934	1928	1060	868	1015
MONROE	140	116	64	52	61
MURRAY	3	3	2	1	2
NEWTON	4	4	2	2	2
OCONEE	3	3	2	1	2
OGLETHORPE	2	2	1	1	1
PAULDING	41	41	23	18	22
PEACH	2572	2572	1415	1157	1354
PIERCE	11	11	6	5	6
PICKENS	0	0	0	0	0
POLK	70	64	35	29	34
PULASKI	30	30	17	14	16
RABUN	4	4	2	2	2
RICHMOND	52	52	29	23	27
SCREVEN	14	14	8	6	7
SEMINOLE	8	8	4	4	4
SPALDING	117	117	64	53	62
SUMTER	2743	2653	1459	1194	1397
TATTNALL	18	18	10	8	9
TAYLOR	463	463	255	208	244
TELFAIR	201	196	108	88	103
TERRELL	915	910	501	410	479
THOMAS	2320	2320	1276	1044	1221
TIFT	2156	2151	1183	968	1133
TOOMBS	742	742	408	334	391
TREUTLEN	388	383	211	172	202
TURNER	11	11	6	5	6
TWIGGS	80	80	44	36	42

UNION	1	1	1	0	1
UPSON	6	6	3	3	3
WALKER	1368	1368	752	616	720
WARE	5	5	3	2	3
WASHINGTON	1186	1182	650	532	622
WAYNE	634	634	349	285	334
WHEELER	0	0	0	0	0
WILCOX	351	351	193	158	185
WORTH	1483	1483	816	667	781

COUNTY	CROPS USED TO ESTIMATE MIGRANT WORKERS
APPLING	44 46 39 33
ATKINSON	46 58 40 49
BACON	39 15 46 39 40 49 33 60
BAKER	49 33
BANKS	2
BARROW	70 33
BARTOW	2 33
BEN HILL	39 46 49 33
BERRIEN	46 58 40 49 33
BIBB	44 43 33
BLECKLEY	33
BRANTLEY	39 46 33
BROOKS	20 39 19 15 47 39 40 70 54 49 18 33 60
BRYAN	39 46
BULLOCH	44 39 46 28 49 33
BURKE	20 39 33
BUTTS	33
CALHOUN	33
CAMDEN	33
CANDLER	46 58 33
CARROLL	33
CATOOSA	47
CHATHAM	46 33
CHEROKEE	2
CHATOOGA	33
CLARKE	33
CLINCH	46 33
CLAY	33
COBB	2
COFFEE	17 46 58 40 49 49 33 60
COLQUIT	39 8 9 19 15 46 39 40 43 47 54 49 33 33
COOK	19 15 46 39 58 40 49 33
COWETA	49 33
CRISP	39 19 49 33
DAWSON	9 49 33
DECATUR	2
DODGE	46 70 47 49 33
DOOLY	46 49 33
DOUGHERTY	39 9 39 49 33
EARLY	43 49 33
ECHOLS	33
EFFINGHAM	46 49 33
ELBERT	39 46 49 33
EMANUEL	33
EVANS	46 40 33
FANNIN	46 33 43
FAYETTE	9 43 18 33
FORSYTH	2
FRANKLIN	43 49 33
FULTON	33
GILMER	43 2
GORDON	2

GRADY	44 20 39 19 46 39 40 70 43 54 33
GWINNETT	2 33
HABERSHAM	2
HALL	2 18
HANCOCK	33
HARRIS	39 33
HENRY	39 49 18
HOUSTON	20 49 2
IRWIN	44 19 46 47 49
JACKSON	49
JEFFERSON	44 46 49
JENKINS	46
LANIER	46 40
LAURENS	20 39 46 49
LEE	49
LONG	46 60
LOWNDES	44 39 46 40 49
LUMPKIN	2
MACON	39 15 62 49 2
MARION	39 49
MERIWETHER	43 2 18
MITCHELL	9 15 46 39 40 47 49
MONROE	46 28 49
MURRAY	2
NEWTON	39
OCONEE	18
OGLETHORPE	18
PAULDING	43 2
PEACH	46 39 58 40 60
PIERCE	2 18
PICKENS	43
POLK	20 49
PULASKI	8 2
RABUN	39 43
RICHMOND	49
SCREVEN	49
SEMINOLE	2 18
SPALDING	15 39 49
SUMTER	44 46 28 50 49
TATTNALL	39 49
TAYLOR	39 46
TELFAIR	49 20
TERRELL	39 19 46 39 40 49
THOMAS	46 39 43 49
TIFT	20 39 46 28 50
TOOMBS	46 49
TREUTLEN	20 9 19 39 70 49
TURNER	49
TWIGGS	19 39 58 43 2
UNION	43
UPSON	2
WALKER	46
WARE	21 40
WASHINGTON	8 21 46 39 43 49 18
WAYNE	46 49
WHEELER	19
WILCOX	9 46 49
WORTH	9 19 46 39 49

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR IDAHO

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
ADA	460	263	158	105	123
CANYON	3121	2184	1310	874	1022
CASSIA	2923	2325	1395	930	1088
ELMORE	1271	1115	669	446	522
FRANKLIN	384	367	220	147	172
GEM	648	580	348	232	271
GOODING	1274	712	427	285	333
JEROME	1111	955	573	382	447
MINIDOKA	931	853	512	341	399
OWYHEE	1028	811	487	324	380
PAYETTE	1529	1466	880	586	686
TWIN FALLS	1885	1169	701	468	547
WASHINGTON	330	185	111	74	87
BANNOCK	198	198	119	79	93
BINGHAM	4244	4244	2546	1698	1986
BLAINE	28	28	17	11	13
BONNER	22	22	13	9	10
BONNEVILLE	2853	2853	1712	1141	1335
BUTTE	221	221	133	88	103
CARIBOU	415	415	249	166	194
CLARK	147	147	88	59	69
CUSTER	38	38	23	15	18
FREMONT	2418	2418	1451	967	1132
JEFFERSON	1483	1483	890	593	694
KOOTENAI	2	2	1	1	1
LINCOLN	296	296	178	118	139
MADISON	2637	2637	1582	1055	1234
POWER	1394	1394	836	558	652
TETON	789	789	473	316	369

COUNTY	CROPS USED TO ESTIMATE MIGRANT WORKERS
ADA	43 36
CANYON	39 28 43 2 13 18 30 32 35 36
CASSIA	39 43 36
ELMORE	43 36
FRANKLIN	39 36
GEM	43 2 13 30 35 36
GOODING	43 36
JEROME	43 36
MINIDOKA	43 36
OWYHEE	28 43 36
PAYETTE	28 43 2 30 35 36
TWIN FALLS	39 43 2 36
WASHINGTON	38 43 2 36
BANNOCK	36
BINGHAM	36
BLAINE	36
BONNER	36
BONNEVILLE	36
BUTTE	36
CARIBOU	36
CLARK	36
CUSTER	36
FREMONT	36
JEFFERSON	36
KOOTENAI	36
LINCOLN	36
MADISON	36
POWER	36
TETON	36

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR ILLINOIS

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
ADAMS	47	47	39	8	9
BOONE	35	35	29	6	7
BUREAU	12	12	10	2	2
CALHOUN	197	108	90	18	21
CASS	7	7	6	1	1
CHAMPAIGN	13	13	11	2	3
COOK	107	98	81	17	19
DE KALB	381	381	316	65	76
DU PAGE	44	38	32	6	8
FAYETTE	12	12	10	2	2
FORD	112	112	93	19	22
FRANKLIN	54	29	24	5	6
FULTON	15	15	12	3	3
IROQUOIS	221	212	176	36	42
JACKSON	428	223	185	38	44
JEFFERSON	32	19	16	3	4
JERSEY	104	104	86	18	21
JOHNSON	55	55	46	9	11
KANE	95	81	67	14	16
KANKAKEE	29	25	21	4	5
LAKE	137	128	106	22	25
LA SALLE	330	330	274	56	66
LEE	188	188	156	32	37
LIVINGSTON	6	6	5	1	1
MACON	19	19	16	3	4
MADISON	61	49	41	8	10
MARION	41	41	34	7	8
MARSHALL	48	26	22	4	5
MASON	123	109	90	19	22
MCHENRY	173	169	140	29	34
MCLEAN	56	56	46	10	11
MERCER	64	64	53	11	13
MONROE	1	1	1	0	0
OGLE	360	360	299	61	72
PEORIA	7	7	6	1	1
PIKE	152	137	114	23	27
PULASKI	6	6	5	1	1
RANDOLPH	50	29	24	5	6
ROCK ISLAND	77	77	64	13	15
SANGAMON	18	18	15	3	4
ST CLAIR	165	111	92	19	22
TAZEWELL	123	114	95	19	23
UNION	466	273	227	46	54
VERMILION	275	275	228	47	55
WABASH	9	9	7	2	2

WAYNE	26	26	22	4	5
WHITESIDE	16	16	13	3	3
WILL	34	73	61	12	15
WINNEBAGO	19	19	16	3	4
WOODFORD	56	52	43	9	10

COUNTY	CROPS USED TO ESTIMATE MIGRANT WORKERS
ADAMS	2
BOONE	43
BUREAU	43
CALHOUN	2 30
CASS	9
CHAMPAIGN	43
COOK	58 38 40 43 47
DE KALB	43
DU PAGE	38 43 47
FAYETTE	2
FORD	43
FRANKLIN	2 30
FULTON	2
IROQUOIS	38 43
JACKSON	2 30
JEFFERSON	2 30
JERSEY	2
JOHNSON	2
KANE	8 9 58 38 43 47
KANKAKEE	38 43 47
LAKE	8 38 43 47 2
LA SALLE	43
LEE	43
LIVINGSTON	43
MACON	43 30
MADISON	9 38 43 2
MARION	2
MARSHALL	2 30
MASON	9 38 43 47 2
MCHENRY	38 43 47 2
MCLEAN	43
MERCER	9 47
MONROE	8
OGLE	43
PEORIA	43
PIKE	2 30
PULASKI	40
RANDOLPH	2 30
ROCK ISLAND	43 47 2
SANGAMON	2
ST CLAIR	9 43 2 30
TAZEWELL	38 43
UNION	58 40 47 2 30
VERMILION	43 2
WABASH	2
WAYNE	30
WHITESIDE	43 30
WILL	8 58 38 43 47 2
WINNEBAGO	43 2
WOODFORD	38 43

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR INDIANA

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
ALLEN	55	55	22	33	39
BARTHOLOMEW	81	81	32	49	57
CASS	82	82	33	49	58
CLARKE	700	595	238	357	418
CLINTON	13	13	5	8	9
CRAWFORD	75	75	30	45	53
DAVIESS	21	21	8	13	15
DEARBORN	534	534	214	320	375
DELAWARE	97	97	39	58	68
ELKHART	41	41	16	25	29
FLOYD	171	171	68	103	120
FRANKLIN	617	617	247	370	433
GIBSON	28	28	11	17	20
GRANT	109	109	44	65	77
GREENE	102	102	41	61	72
HANCOCK	10	10	4	6	7
HARRISON	701	701	280	421	492
HENDRICKS	96	96	38	58	67
HENRY	15	15	6	9	11
HOWARD	96	96	38	58	67
JACKSON	89	85	34	51	60
JAY	28	28	11	17	20
JEFFERSON	1853	1853	741	1112	1301
JENNINGS	286	286	114	172	201
JOHNSON	31	31	12	19	22
KNOX	140	110	44	66	77
LAGRANGE	9	9	4	5	6
LAKE	210	128	51	77	90
LA PORTE	380	180	72	108	126
MADISON	146	146	58	88	102
MARSHALL	228	228	91	137	160
MONROE	16	16	6	10	11
MORGAN	30	30	12	18	21
NOBLE	22	22	9	13	15
OHIO	541	541	216	325	380
PARKE	13	13	5	8	9
PORTER	9	9	4	5	6
PUTNAM	9	9	4	5	6
RIPLEY	442	442	177	265	310
SCOTT	213	213	85	128	150
SPENCER	437	437	175	262	307
STEUBEN	11	11	4	7	8
ST JOSEPH	78	64	26	38	45
SULLIVAN	39	39	16	23	27
SWITZERLAND	1562	1562	625	937	1097

TIPPECANOE	8	8	3	5	6
TIPTON	106	106	42	64	74
VIGO	6	6	2	4	4
WASHINGTON	380	380	152	228	267

COUNTY	CROPS USED TO ESTIMATE MIGRANT WORKERS
ALLEN	41
BARTHOLOMEW	38
CASS	47
CLARKE	46 9 58 38 47 41
CLINTON	47
CRAWFORD	46
DAVIESS	9 49
DEARBORN	46 2
DELAWARE	47 2
ELKHART	2
FLOYD	46 38 2
FRANKLIN	46
GIBSON	9 49
GRANT	47
GREENE	46 2
HANCOCK	2
HARRISON	46
HENDRICKS	47 2
HENRY	2
HOWARD	47 2
JACKSON	9 38 49
JAY	47
JEFFERSON	46 2
JENNINGS	46
JOHNSON	2
KNOX	9 49 2
LAGRANGE	2
LAKE	58 38 47 2 41
LA PORTE	2 18 60
MADISON	47
MARSHALL	60
MONROE	2
MORGAN	2
NOBLE	2
OHIO	46
PARKE	2
PORTER	2
PUTNAM	2
RIPLEY	46
SCOTT	46 2
SPENCER	46
STEUBEN	2
ST JOSEPH	47 2 60
SULLIVAN	9 49
SWITZERLAND	46
TIPPECANOE	2
TIPTON	47
VIGO	2
WASHINGTON	46 2

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR IOWA

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
BLACK HAWK	7	7	1	6	7
BUCHANAN	11	11	2	9	11
BUTLER	53	53	7	46	53
DUBUQUE	8	8	1	7	8
FRANKLIN	180	180	25	155	181
GUTHRIE	8	8	1	7	8
HARDIN	67	67	9	58	67
JACKSON	6	6	1	5	6
JASPER	13	13	2	11	13
JOHNSON	13	13	2	11	13
KOSSUTH	60	60	8	52	60
LEE	17	17	2	15	17
LINN	21	21	3	18	21
LOUISA	890	887	124	763	892
MADISON	16	16	2	14	16
MARION	13	13	2	11	13
MITCHELL	25	25	4	22	25
MUSCATINE	635	617	86	531	621
POLK	61	61	9	52	61
POTTAWATTAMIE	42	42	6	36	42
SCOTT	25	25	4	22	25
STORY	11	11	2	9	11
WARREN	38	38	5	33	38
WASHINGTON	6	6	1	5	6
WEBSTER	3	3	0	3	3
WINNESHIEK	4	4	1	3	4
WOODBURY	5	5	1	4	5

COUNTY	CROPS USED TO ESTIMATE MIGRANT WORKERS
BLACK HAWK	43
BUCHANAN	43
BUTLER	43
DUBUQUE	2
FRANKLIN	43
GUTHRIE	2
HARDIN	43 2
JACKSON	2
JASPER	2
JOHNSON	2
KOSSUTH	21 43
LEE	43 49 2
LINN	43 2
LOUISA	36 9 47 49
MADISON	2
MARION	2
MITCHELL	28
MUSCATINE	36 9 58 43 47 47
POLK	43 2
POTTAWATTAMIE	2
SCOTT	28 2
STORY	2
WARREN	43 2
WASHINGTON	2
WEBSTER	43
WINNESHIEK	2
WOODBURY	2

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR KANSAS

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
CHEROKEE	41	41	27	14	16
CLOUD	6	6	4	2	2
DONIPHAN	82	82	54	28	33
JOHNSON	5	5	3	2	2
LABETTE	18	18	12	6	7
LEAVENWORTH	9	9	6	3	4
LINCOLN	17	17	11	6	7
MIAMI	21	18	12	6	7
NEOSHO	62	62	41	21	25
RENO	111	96	63	33	38
RILEY	10	10	7	3	4
SEDGWICK	247	126	83	43	50
SHAWNEE	7	7	5	2	3
SUMNER	31	21	14	7	8
WYANDOTTE	53	36	24	12	14

COUNTY	CROPS USED TO ESTIMATE MIGRANT WORKERS
CHEROKEE	33
CLOUD	43
DONIPHAN	2
JOHNSON	43
LABETTE	33
LEAVENWORTH	2
LINCOLN	33
MIAMI	2 33
NEOSHO	33
RENO	2 2 30
RILEY	2
SEDGWICK	2 2 30
SHAWNEE	43
SUMNER	2 30 33
WYANDOTTE	38 43 2 30

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR KENTUCKY

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
ADAIR	3751	3751	375	3376	3950
ALLEN	2564	2550	255	2295	2685
ANDERSON	2689	2689	269	2420	2832
BALLARD	1667	1667	167	1500	1755
BARREN	7983	7983	798	7185	8406
BATH	4941	4941	494	4447	5203
BOYLE	3513	3513	351	3162	3699
BOONE	2786	2726	273	2453	2870
BOYD	91	91	9	82	96
BOURBON	8907	8907	891	8016	9379
BRACKEN	4425	4425	443	3983	4660
BRECKENRIDGE	4815	4807	481	4326	5062
BREATHITT	918	918	92	826	967
BULLITT	1074	1074	107	967	1131
BUTLER	893	893	89	804	940
CALDWELL	1269	1269	127	1142	1336
CAMPBELL	671	663	66	597	698
CALLOWAY	3342	3342	334	3008	3519
CARLISLE	653	653	65	588	688
CASEY	4256	4256	426	3830	4482
CHRISTIAN	6789	6781	678	6103	7140
CLARK	5305	5305	531	4775	5586
CLINTON	1575	1575	158	1418	1658
CLAY	1655	1655	166	1490	1743
CRITTENDON	52	52	5	47	55
CARROLL	2338	2338	234	2104	2462
CARTER	2656	2656	266	2390	2797
CUMBERLAND	1771	1771	177	1594	1865
DAVIESS	5745	5724	572	5152	6027
EDMONSON	1224	1224	122	1102	1289
ELLIOTT	1550	1550	155	1395	1632
ESTILL	1270	1270	127	1143	1337
FAYETTE	7986	7986	799	7187	8409
FLEMING	6570	6570	657	5913	6918
FRANKLIN	3960	3958	396	3562	4168
GALLATIN	1648	1648	165	1483	1735
GARRARD	4904	4904	490	4414	5164
GRANT	4606	4606	461	4145	4850
GREEN	4033	4033	403	3630	4247
GREENUP	1461	1459	146	1313	1536
GRAVES	3955	3955	396	3560	4165
GRAYSON	2686	2686	269	2417	2828
HARRISON	7498	7498	750	6748	7895
HANCOCK	1736	1736	174	1562	1828
HARDIN	3116	3116	312	2804	3281

HART	5658	5658	566	5092	5958
HENDERSON	1028	1028	103	925	1082
HENRY	5464	5464	546	4918	5754
HICKMAN	175	175	18	158	184
HOPKINS	496	496	50	446	522
JACKSON	2546	2546	255	2291	2681
JEFFERSON	691	648	65	583	682
JESSAMINE	4918	4914	491	4423	5174
JOHNSON	408	408	41	367	430
KENTON	1191	1187	119	1068	1250
KNOX	682	682	68	614	718
LARUE	2016	2016	202	1814	2123
LAUREL	3167	3167	317	2850	3335
LAWRENCE	642	642	64	578	676
LEE	428	428	43	385	451
LESLIE	48	48	5	43	51
LEWIS	3426	3426	343	3083	3608
LINCOLN	4843	4843	484	4359	5100
LIVINGSTON	133	112	11	101	118
LOGAN	5697	5690	569	5121	5992
LYON	670	670	67	603	706
MADISON	7577	7577	758	6819	7979
MAGOFFIN	1328	1328	133	1195	1398
MARION	3701	3701	370	3331	3897
MASON	6256	6256	626	5630	6588
MCCRACKEN	878	822	82	740	866
MCLEAN	1713	1713	171	1542	1804
MCCREARY	38	38	4	34	40
MEADE	1339	1339	134	1205	1410
MENIFEE	1315	1315	132	1184	1385
MERCER	4944	4944	494	4450	5206
METCALFE	3755	3755	376	3380	3954
MONROE	2394	2394	239	2155	2521
MORGAN	2987	2987	299	2688	3145
MONTGOMERY	4833	4833	483	4350	5089
MARSHALL	561	561	56	505	591
MUHLENBERG	1233	1233	123	1110	1298
NELSON	3447	3447	345	3102	3630
NICHOLAS	5440	5440	544	4896	5728
OHIO	2197	2197	220	1977	2313
OLDHAM	1034	1034	103	931	1089
OWEN	5812	5812	581	5231	6120
OWSLEY	1133	1133	113	1020	1193
PENDLETON	4190	4190	419	3771	4412
PERRY	24	24	2	22	25
POWELL	997	997	100	897	1050
PULASKI	4954	4954	495	4459	5217
ROBERTSON	2074	2074	207	1867	2184
ROCKCASTLE	2457	2457	246	2211	2587
ROWAN	1296	1296	130	1166	1365
RUSSELL	2376	2376	238	2138	2502
SCOTT	7176	7176	718	6458	7556
SHELBY	7539	7517	752	6765	7915
SIMPSON	2283	2283	228	2055	2404
SPENCER	2714	2714	271	2443	2858
TAYLOR	3318	3318	332	2986	3494

TODD	3869	3869	387	3482	4074
TRIGG	2624	2624	262	2362	2763
TRIMBLE	2234	2234	223	2011	2352
UNION	70	42	4	38	44
WARREN	4506	4486	449	4037	4724
WASHINGTON	4418	4418	442	3976	4652
WAYNE	2033	2031	203	1828	2139
WEBSTER	698	698	70	628	735
WHITLEY	536	536	54	482	564
WOLFE	1599	1599	160	1439	1684
WOODFORD	6656	6656	666	5990	7009
BELL	13	13	1	12	14

COUNTY	CROPS USED TO ESTIMATE MIGRANT WORKERS
ADAIR	46 36 58 2
ALLEN	46 36 8 9 43
ANDERSON	46
BALLARD	46
BARREN	46
BATH	46 36 58
BOYLE	46 2
BOONE	46 36 39 43 47 2 30 41
BOYD	46
BOURBON	46
BRACKEN	46 2
BRECKENRIDGE	46 2 30
BREATHITT	46
BULLITT	46
BUTLER	46
CALDWELL	46
CAMPBELL	46 39 43 2
CALLOWAY	46 2
CARLISLE	46
CASEY	46 58 62 2
CHRISTIAN	46 2 30
CLARK	46
CLINTON	46 47
CLAY	46
CRITTENDON	46 62
CARROLL	46
CARTER	46 36
CUMBERLAND	46
DAVIESS	46 36 39 43 47 30
EDMONSON	46
ELLIOTT	46 2
ESTILL	46 2
FAYETTE	46 36 2
FLEMING	46 36 58
FRANKLIN	46 43
GALLATIN	46
GARRARD	46 36
GRANT	46
GREEN	46
GREENUP	46 43
GRAVES	46 2
GRAYSON	46 2
HARRISON	46
HANCOCK	46
HARDIN	46 36 2
HART	46 36
HENDERSON	46
HENRY	46 36 2
HICKMAN	46
HOPKINS	46
JACKSON	46
JEFFERSON	46 39 43 47 2 30 41

JESSAMINE	46 43
JOHNSON	46
KENTON	46 43 2
KNOX	46
LARUE	46 62 38 2
LAUREL	46 36 2
LAWRENCE	46 2
LEE	46 58
LESLIE	46
LEWIS	46
LINCOLN	46 2
LIVINGSTON	2 30 46 36
LOGAN	2 30 46
LYON	46
MADISON	46
MAGOFFIN	46
MARION	46 36
MASON	46
MCCRACKEN	46 2 30 41
MCLEAN	46
MCCREARY	46
MEADE	46 36 2
MENIFEE	46 58
MERCER	46
METCALFE	46 2
MONROE	46
MORGAN	46
MONTGOMERY	46
MARSHALL	46 2
MUHLENBERG	46
NELSON	46 36 58
NICHOLAS	46
OHIO	46 36 2
OLDHAM	46 2
OWEN	46 2
OWSLEY	46
PENDLETON	46
PERRY	46
POWELL	46
PULASKI	46 36 58 2
ROBERTSON	46
ROCKCASTLE	46 58 2
ROWAN	46 2
RUSSELL	46 58 2
SCOTT	46
SHELBY	46 41
SIMPSON	46
SPENCER	46
TAYLOR	36 46
TODD	2 46
TRIGG	46
TRIMBLE	46
UNION	8 43 47 30 46
WARREN	46 2 30
WASHINGTON	46 36
WAYNE	46 8 58
WEBSTER	46

WHITLEY	46	36
WOLFE	46	36
WOODFORD	46	2
BELL	46	

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR LOUISIANA

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
ALLEN	3	3	2	1	2
ASCENSION	509	509	265	244	286
ASSUMPTION	1597	1597	830	767	897
AVOYELLES	2130	2124	1104	1020	1193
BEAUREGARD	39	32	17	15	18
BIENVILLE	36	35	18	17	20
BOSSIER	19	18	9	9	10
CADDO	42	35	18	17	20
CALCASIEU	1	1	1	0	1
CALDWELL	4	4	2	2	2
CLAIBORNE	1	1	1	0	1
CONCORDIA	7	7	4	3	4
DE SOTO	1	1	1	0	1
EAST BATON ROUGE	8	8	4	4	4
EAST CARROLL	2	2	1	1	1
EAST FELICIANA	34	34	18	16	19
EVANGELINE	1202	1202	625	577	675
FRANKLIN	212	208	108	100	117
GRANT	18	12	6	6	7
IBERIA	1815	1815	944	871	1019
IBERVILLE	734	729	379	350	409
JACKSON	2	2	1	1	1
JEFFERSON DAVIS	1	1	1	0	1
LAFAYETTE	178	108	56	52	61
LAFOURCHE	1579	1572	817	755	883
LINCOLN	22	19	10	9	11
LIVINGSTON	21	20	10	10	11
MADISON	25	25	13	12	14
NATCHITOCHES	52	52	27	25	29
OUACHITA	63	51	27	24	29
PLAQUEMINES	91	77	40	37	43
POINTE COUPEE	186	186	97	89	104
RAPIDES	95	78	41	37	44
RED RIVER	2	1	1	0	1
RICHLAND	3	3	2	1	2
SABINE	1	1	1	0	1
ST MARY	1570	1570	816	754	882
ST JOHN BAPTIST	325	319	166	153	179
ST HELENA	5	5	3	2	3
ST JAMES	772	740	385	355	416
ST LANDRY	788	781	406	375	439
ST MARTIN	1054	1051	547	504	590
ST TAMMANY	5	3	2	1	2
TANGIPAHOA	272	228	119	109	128
TERREBONNE	529	525	273	252	295

UNION	24	22	11	11	12
VERNON	1	1	1	0	1
VERMILION	23	15	8	7	8
WASHINGTON	11	9	5	4	5
WEBSTER	1	1	1	0	1
WEST CARROLL	685	684	356	328	384
WEST FELECIANA	97	93	48	45	52
WEST BATON ROUGE	230	230	120	110	129
WINN	2	2	1	1	1

COUNTY	CROPS USED TO ESTIMATE MIGRANT WORKERS					
ALLEN	43					
ASCENSION	42	42	33			
ASSUMPTION	42	42				
AVOYELLES	44	33				
BEAUREGARD	21	43	49	33		
BIENVILLE	21	49				
BOSSIER	21	33				
CADDO	21	19	70	19	33	
CALCASIEU	33					
CALDWELL	33					
CLAIBORNE	21					
CONCORDIA	33					
DE SOTO	33					
EAST BATON ROUGE	33					
EAST CARROLL	33					
EAST FELICIANA	30					
EVANGELINE	44					
FRANKLIN	44	33				
GRANT	49	33				
IBERIA	42	42	33			
IBERVILLE	42	42	70	33		
JACKSON	49					
JEFFERSON DAVIS	33					
LAFAYETTE	44	42	33			
LAFOURCHE	42	50	43			
LINCOLN	21	49				
LIVINGSTON	33	41				
MADISON	70					
NATCHITOCHES	33					
OUACHITA	21	70	49	33		
PLAQUEMINES	19	70	47	29	45	33
POINTE COUPEE	42	42	33			
RAPIDES	44	21	70	49	33	
RED RIVER	21	33				
RICHLAND	33					
SABINE	21					
ST MARY	42	42				
ST JOHN BAPTIST	42	42	47	33		
ST HELENA	49					
ST JAMES	42	42	19	58		
ST LANDRY	44	33				
ST MARTIN	42	42	70	33		
ST TAMMANY	49	33				
TANGIPAHOA	15	58	49	33	41	
TERREBONNE	42	42	43	45		
UNION	21	43	49			
VERNON	33					
VERMILION	42	49	33			
WASHINGTON	43	49	33			
WEBSTER	33					
WEST CARROLL	44	33				
WEST FELECIANA	44	33				
WEST BATON ROUGE	33	42	42			
WINN	49					

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR MAINE

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
ANDROSCOGGIN	621	572	177	395	462
AROOSTOOK	15953	15187	4708	10479	12260
CUMBERLAND	527	329	102	227	266
FRANKLIN	148	145	45	100	117
HANCOCK	1840	1823	565	1258	1472
KENNEBEC	446	368	114	254	297
KNOX	726	715	222	493	577
OXFORD	541	498	154	344	402
LINCOLN	386	327	101	226	264
PENOBSCOT	849	713	221	492	576
PISCATAQUIS	90	90	28	62	73
SAGADAHOC	20	20	6	14	16
SOMERSET	119	68	21	47	55
WALDO	531	460	143	317	371
WASHINGTON	6051	6032	1870	4162	4870
YORK	976	899	279	620	726

COUNTY	CROPS USED TO ESTIMATE MIGRANT WORKERS
ANDROSCOGGIN	43 2 41
AROOSTOOK	6 36 21 2 41
CUMBERLAND	6 11 36 15 24 21 38 40 43 2 60 41
FRANKLIN	43 2
HANCOCK	2 60 60 41
KENNEBEC	21 43 36 2 60 41
KNOX	40 2 60 60
OXFORD	40 2 36 60
LINCOLN	43 2 60 41
PENOBSCOT	40 43 2 36 60 41
PISCATAQUIS	60 36
SAGADAHOC	2
SOMERSET	6 40 36 43 2
WALDO	43 36 2 60
WASHINGTON	2 36 60 60 41
YORK	2 60 41

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR MARYLAND

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
ALLEGANY	110	110	44	66	77
ANNE ARUNDEL	2206	2165	866	1299	1520
BALTIMORE	564	474	190	284	333
CALVERT	3430	3430	1372	2058	2408
CARROLL	139	110	44	66	77
CAROLINE	714	613	245	368	430
CECIL	92	66	26	40	46
CHARLES	4262	4243	1697	2546	2979
DORCHESTER	657	649	260	389	456
FREDERICK	279	210	84	126	147
GARRETT	55	55	22	33	39
HARFORD	336	281	112	169	197
HOWARD	131	77	31	46	54
KENT	205	205	82	123	144
MONTGOMERY	162	87	35	52	61
PRINCE GEORGES	2944	2840	1136	1704	1994
QUEEN ANNES	263	227	91	136	159
SOMERSET	195	195	78	117	137
ST MARYS	6159	6159	2464	3695	4324
TALBOT	27	27	11	16	19
WASHINGTON	916	522	209	313	366
WICOMICO	458	420	168	252	295
WORCESTER	132	132	53	79	93

COUNTY	CROPS USED TO ESTIMATE MIGRANT WORKERS
ALLEGANY	43 2
ANNE ARUNDEL	46 44 9 38 43 47 54 30 41
BALTIMORE	20 57 19 15 69 19 58 38 40 43 47 54 2 13 30 41
CALVERT	46 36 43 2
CARROLL	43 2 30
CAROLINE	20 9 15 21 52 38 40 43 47 49 13 41
CECIL	43 2 30
CHARLES	46 43 41
DORCHESTER	15 21 43 47 49
FREDERICK	46 43 2 13 18 30 32 41
GARRETT	43
HARFORD	43 47 2 30 41
HOWARD	38 43 47 2 30 41
KENT	43 47
MONTGOMERY	38 43 47 2 30 41
PRINCE GEORGES	46 19 70 38 53 43 47 49 2 30 41
QUEEN ANNES	20 21 52 40 43 47
SOMERSET	15 43 47 30
ST MARYS	46 43 47 43 47
TALBOT	43
WASHINGTON	2 18 30 32
WICOMICO	9 15 22 38 40 43 47 49 41
WORCESTER	36 49

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR MASSACHUSETTS

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
BARNSTABLE	10	10	3	7	8
BERKSHIRE	100	67	21	46	54
BRISTOL	843	395	122	273	319
DUKES	38	34	11	23	27
ESSEX	314	175	54	121	141
FRANKLIN	1826	1514	469	1045	1222
HAMPDEN	4672	4183	1297	2886	3377
HAMPSHIRE	642	392	122	270	316
MIDDLESEX	654	361	112	249	291
NANTUCKET	6	6	2	4	5
NORFOLK	61	42	13	29	34
PLYMOUTH	418	213	66	147	172
WORCESTER	1315	875	271	604	706

COUNTY	CROPS USED TO ESTIMATE MIGRANT WORKERS
BARNSTABLE	43
BERKSHIRE	58 43 2
BRISTOL	36 39 8 15 16 24 52 58 19 40 43 47 2 30 32 60 41
DUKES	43 47 18
ESSEX	39 8 15 24 58 19 40 43 47 2 41
FRANKLIN	36 8 11 15 58 40 43 47 2 30 41 28
HAMPDEN	36 4 39 8 9 11 15 24 58 40 43 47 2 30 60 41
HAMPSHIRE	8 15 28 58 40 43 47 2 30 60
MIDDLESEX	39 8 24 58 19 40 43 47 2 30 32 41
NANTUCKET	43
NORFOLK	58 43 47 2
PLYMOUTH	36 39 58 40 43 47 2 30 60 41
WORCESTER	36 39 8 38 40 43 47 2 30 32 60 41

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR MICHIGAN

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
ALLEGAN	2629	2009	1788	221	259
ALPENA	132	132	117	15	17
ANTRIM	1333	1087	967	120	140
ARENAC	630	472	420	52	61
BARRY	121	106	94	12	14
BAY	1228	778	692	86	100
BENZIE	1090	842	749	93	108
BERRIEN	6932	4605	4098	507	593
BRANCH	32	60	53	7	8
CALHOUN	530	530	472	58	68
CASS	940	453	403	50	58
CHARLEVOIX	191	175	156	19	23
CLINTON	118	77	69	8	10
EATON	353	252	224	28	32
EMMET	50	42	37	5	5
GENESEE	300	134	119	15	17
GRAND TRAVERSE	3733	3357	2988	369	432
GRATIOT	761	761	677	84	98
HILLSDALE	102	102	91	11	13
HOUGHTON	93	93	83	10	12
INGHAM	597	505	449	56	65
IONIA	559	528	470	58	68
ISABELLA	56	41	36	5	5
JACKSON	153	119	106	13	15
KALAMAZOO	412	239	213	26	31
KENT	3864	2657	2365	292	342
LAPEER	916	835	743	92	107
LEELANAU	4696	4024	3581	443	518
LENAWEE	435	355	316	39	46
LIVINGSTON	135	105	93	12	14
MACOMB	789	624	555	69	80
MANISTEE	2001	1038	924	114	134
MASON	2138	1341	1193	148	173
MECOSTA	413	345	307	38	44
MIDLAND	88	88	78	10	11
MISSAUKEE	39	39	35	4	5
MONROE	778	482	429	53	62
MONTCALM	1019	916	815	101	118
MUSKEGON	1599	1000	890	110	129
NEWAYGO	2879	2678	2383	295	345
OAKLAND	262	154	137	17	20
OCEANA	8284	3678	3273	405	473
OTTAWA	3417	1781	1585	196	229
SAGINAW	420	320	285	35	41
ST CLAIR	196	196	174	22	25

ST JOSEPH	332	311	277	34	40
SANILAC	282	282	251	31	36
SHIAWASSEE	34	20	18	2	3
TUSCOLA	721	570	507	63	73
VAN BUREN	7195	4393	3910	483	565
WASHTENAW	570	294	262	32	38
WAYNE	233	162	144	18	21
WEXFORD	87	87	77	10	11
HURON	120	120	107	13	15

COUNTY	CROPS USED TO ESTIMATE MIGRANT WORKERS
ALLEGAN	4 36 9 10 11 12 15 28 43 2 13 18 30 32 35 7 41
ALPENA	4 41
ANTRIM	2 36 13 30 35
ARENAC	15 36
BARRY	39 21 2
BAY	8 9 36 11 15 28 22 43 47 2
BENZIE	2 13 30 35
BERRIEN	4 39 36 9 15 22 40 43 47 2 13 18 30 32 35 7 41
BRANCH	43 47 2 41
CALHOUN	28 43
CASS	4 15 22 40 43 47 2 13 18 30 35
CHARLEVOIX	2 13
CLINTON	43 2 41
EATON	15 36 28 43 2 41
EMMET	43 36
GENESEE	43 47 2 13 41
GRAND TRAVERSE	39 43 2 13 30 35
GRATIOT	11 15 22
HILLSDALE	43 47 2
HOUGHTON	41 36
INGHAM	15 36 28 43 47 2 41
IONIA	39 15 21 43 2 30
ISABELLA	4 2
JACKSON	15 22 43 47 2 41
KALAMAZOO	4 43 36 2 13 18 41
KENT	4 39 36 8 11 12 15 28 40 43 2 13 30 32 35 41
LAPEER	8 10 36 28 19 43 2 41
LEELANAU	4 2 36 13 18 30 32 35 41
LENAWEE	8 15 36 43 47 2 30 41
LIVINGSTON	9 43 2 41
MACOMB	39 8 9 11 19 15 16 19 50 22 22 40 43 47 2 30 41
MANISTEE	4 15 43 2 36 13 30 35 41
MASON	4 39 43 2 13 30 32 35 41
MECOSTA	4 36 43 2 13 41
MIDLAND	15
MISSAUKEE	41 36
MONROE	8 9 36 11 15 22 22 19 43 47 2 41
MONTCALM	15 21 43 36 2
MUSKEGON	4 39 10 12 28 43 2 13 30 7
NEWAYGO	4 10 12 36 28 43 2 13 35
OAKLAND	22 43 2 13 18 41
OCEANA	4 39 11 15 40 43 2 13 30 30 32 35 41
OTTAWA	4 8 9 10 11 12 15 28 22 40 43 47 2 13 30 35 7 41
SAGINAW	8 15 43 47 2 41
ST CLAIR	39 8 11 15 43 47 2
ST JOSEPH	4 4 2
SANILAC	15 2

SHIAWASSEE	2 41
TUSCOLA	15 28 43 36 2 41
VAN BUREN	4 9 15 22 40 43 47 2 13 30 30 32 35 18 7 41
WASHTENAW	9 22 43 47 2 41 13
WAYNE	9 22 38 43 47 2 41
WEXFORD	39
HURON	36

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR MINNESOTA

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
ANOKA	249	150	146	5	5
BECKER	5	5	5	0	0
BELTRAMI	5	5	5	0	0
BENTON	8	8	8	0	0
BIG STONE	17	17	16	1	1
BLUE EARTH	432	356	345	11	12
BROWN	780	728	706	22	26
CARLTON	74	61	59	2	2
CHISAGO	21	21	20	1	1
CLAY	1366	1348	1308	40	47
CROW WING	17	17	16	1	1
DAKOTA	1808	1697	1646	51	60
DODGE	1831	1717	1665	52	60
DOUGLAS	15	15	15	0	1
FARIBAULT	1189	1127	1093	34	40
FILLMORE	4	4	4	0	0
FREEBORN	1694	1694	1643	51	59
GOODHUE	1244	1106	1073	33	39
GRANT	74	74	72	2	3
HENNEPIN	615	429	416	13	15
HOUSTON	70	70	68	2	2
ISANTI	7	7	7	0	0
ITASCA	33	33	32	1	1
KANDIYOHI	487	454	440	14	16
KITTSON	794	794	770	24	28
LAKE OF THE WOODS	97	97	94	3	3
LE SEUR	440	344	334	10	12
MARTIN	489	420	407	13	15
MCLEOD	1307	1215	1179	36	43
MEEKER	527	449	436	13	16
MOWER	1080	917	889	28	32
NICOLLET	704	624	605	19	22
NORMAN	231	231	224	7	8
OLMSTEAD	527	483	469	14	17
OTTER TAIL	37	31	30	1	1
POPE	651	651	631	20	23
RED LAKE	769	705	684	21	25
RENVILLE	2019	1793	1739	54	63
RICE	108	96	93	3	3
SCOTT	63	48	47	1	2
SHERBURNE	1319	1213	1177	36	43
SIBLEY	646	548	532	16	19
STEELE	398	360	349	11	13
STEARNS	119	109	106	3	4
ST LOUIS	25	25	24	1	1

SWIFT	196	196	190	6	7
TODD	392	392	380	12	14
WABASHA	707	635	616	19	22
WASECA	37	37	36	1	1
WASHINGTON	374	162	157	5	6
WATONWAN	163	135	131	4	5
WILKIN	84	84	81	3	3
WINONA	117	108	105	3	4
WRIGHT	253	222	215	7	8
MARSHALL	1801	1801	1747	54	63
POLK	420	420	407	13	15

COUNTY	CROPS USED TO ESTIMATE MIGRANT WORKERS
ANOKA	36 58 38 40 43
BECKER	43
BELTRAMI	43
BENTON	43
BIG STONE	43
BLUE EARTH	21 43
BROWN	21 43
CARLTON	36 21 43 2
CHISAGO	43 2
CLAY	36 40 43
CROW WING	43
DAKOTA	36 39 43 58 38 40 43 47 2
DODGE	21 43 43
DOUGLAS	43 2
FARIBAULT	21 36 43
FILLMORE	21
FREEBORN	36 28 43 43
GOODHUE	21 43 2
GRANT	43
HENNEPIN	36 39 38 40 43 47 2 61 41
HOUSTON	2
ISANTI	43
ITASCA	36
KANDIYOHI	21 43 2
KITTSON	36
LAKE OF THE WOODS	36
LE SEUR	21 43
MARTIN	21 43
MCLEOD	21 43
MEEKER	21 43 2
MOWER	39 21 43
NICOLLET	21 43
NORMAN	36
OLMSTEAD	2 21 43
OTTER TAIL	43 41
POPE	36 43
RED LAKE	36 21 43
RENVILLE	21 43 43
RICE	21 43 2
SCOTT	21 43 2
SHERBURNE	36 58 38 40 43 47 49
SIBLEY	21 43
STEELE	21 43
STEARNS	21 43
ST LOUIS	36 43
SWIFT	43
TODD	36 43
WABASHA	21 43 49 2
WASECA	21
WASHINGTON	39 58 38 43 2 41
WATONWAN	21 43
WILKIN	36
WINONA	21 43 2

WRIGHT	43	2
MARSHALL	36	36
POLK	36	

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR MISSISSIPPI

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
ADAMS	4	4	2	2	2
ALCORN	0	0	0	0	0
AMITE	8	5	3	3	3
BOLIVAR	47	47	24	24	27
CLAIBORNE	3	3	2	2	2
CLARKE	9	9	5	5	5
CLAY	10	7	4	4	4
COPIAH	25	12	6	6	7
COVINGTON	54	31	16	16	18
DE SOTO	2	2	1	1	1
FORREST	18	14	7	7	8
GEORGE	19	15	8	8	9
GRENADA	12	9	5	5	5
HANCOCK	14	14	7	7	8
HARRISON	46	46	23	23	27
HINDS	60	41	21	21	24
HOLMES	6	4	2	2	2
JACKSON	27	19	10	10	11
JASPER	14	9	5	5	5
JEFFERSON DAVIS	42	40	20	20	23
JEFFERSON	6	6	3	3	4
JONES	40	21	11	11	12
KEMPER	6	4	2	2	2
LAMAR	21	21	11	11	12
LAUDERDALE	80	65	33	33	38
LAWRENCE	3	3	2	2	2
LEE	2	2	1	1	1
LINCOLN	3	3	2	2	2
MADISON	14	8	4	4	5
MARION	11	8	4	4	5
MONROE	8	8	4	4	5
NEWTON	8	8	4	4	5
NOXUBEE	8	4	2	2	2
OKTIBBEHA	11	8	4	4	5
PANOLA	20	20	10	10	12
PEARL RIVER	12	12	6	6	7
PERRY	63	63	32	32	37
PIKE	7	7	4	4	4
PONTOTOC	265	256	128	128	150
QUITMAN	256	256	128	128	150
SHARKEY	21	21	11	11	12
SIMPSON	63	59	30	30	35
SMITH	6	6	3	3	4
STONE	230	230	115	115	135
SUNFLOWER	18	18	9	9	11

TALLAHATCHIE	25	25	13	13	15
TUNICA	18	18	9	9	11
WALTHALL	23	17	9	9	10
WASHINGTON	8	8	4	4	5
WAYNE	5	5	3	3	3
WEBSTER	26	26	13	13	15
WILKINSON	4	4	2	2	2
WINSTON	13	10	5	5	6
COAHOMA	121	121	61	61	71

COUNTY	CROPS USED TO ESTIMATE MIGRANT WORKERS		
ADAMS	33		
ALCORN	62		
AMITE	33		
BOLIVAR	33		
CLAIBORNE	33		
CLARKE	30		
CLAY	30	33	
COPIAH	49	33	
COVINGTON	49	33	
DE SOTO	33		
FORREST	49	33	
GEORGE	49	33	
GRENADA	49	33	
HANCOCK	33		
HARRISON	33		
HINDS	30	33	
HOLMES	33		
JACKSON	49	33	
JASPER	49	33	
JEFFERSON DAVIS	49	33	
JEFFERSON	33		
JONES	49	30	33
KEMPER	49	33	
LAMAR	49		
LAUDERDALE	30	33	
LAWRENCE	33		
LEE	33		
LINCOLN	33		
MADISON	30		
MARION	49	33	
MONROE	33		
NEWTON	33		
NOXUBEE	33		
OKTIBBEHA	30	33	
PANOLA	33		
PEARL RIVER	49		
PERRY	33		
PIKE	33		
PONTOTOC	33		
QUITMAN	44		
SHARKEY	33		
SIMPSON	33	49	
SMITH	33		
STONE	49	49	
SUNFLOWER	33		
TALLAHATCHIE	33		
TUNICA	33		
WALTHALL	30		
WASHINGTON	33		
WAYNE	33		
WEBSTER	33		
WILKINSON	33		
WINSTON	33		

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR MISSOURI

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
ANDREW	53	53	1	52	61
BARRY	195	195	4	191	224
BATES	51	47	1	46	54
BUCHANAN	601	601	12	589	689
BUTLER	16	16	0	16	18
CAPE GIRADEAU	9	9	0	9	10
CARROLL	4	4	0	4	5
CASS	15	15	0	15	17
CEDAR	5	5	0	5	6
CHARITON	191	149	3	146	171
CHRISTIAN	6	6	0	6	7
CLARK	12	12	0	12	14
COOPER	14	14	0	14	16
CRAWFORD	22	22	0	22	25
DOUGLAS	37	37	1	36	42
DUNKLIN	480	473	9	464	542
FRANKLIN	21	21	0	21	24
GASCONADE	80	80	2	78	92
GREENE	19	19	0	19	22
HOWARD	248	248	5	243	284
JACKSON	76	76	2	74	87
JASPER	5	5	0	5	6
JEFFERSON	18	18	0	18	21
LAFAYETTE	254	254	5	249	291
LAWRENCE	85	85	2	83	97
LIVINGSTON	4	4	0	4	5
MONTGOMERY	8	8	0	8	9
NEWTON	30	30	1	29	34
PETTIS	21	21	0	21	24
PHELPS	204	204	4	200	234
PLATTE	1741	1741	35	1706	1996
RIPLEY	7	7	0	7	8
SCOTT	43	43	1	42	49
ST CLAIR	7	7	0	7	8
ST CHARLES	49	45	1	44	52
ST LOUIS	15	15	0	15	17
STONE	4	4	0	4	5
VERNON	141	141	3	138	162
WASHINGTON	10	10	0	10	11
WRIGHT	73	73	1	72	84
BOONE	61	61	1	60	70
CLAY	36	36	1	35	41
CLINTON	36	36	1	35	41

COUNTY	CROPS USED TO ESTIMATE MIGRANT WORKERS
ANDREW	2
BARRY	18 30
BATES	30 33
BUCHANAN	30 46
BUTLER	49
CAPE GIRADEAU	30
CARROLL	33
CASS	18
CEDAR	30
CHARITON	33 46
CHRISTIAN	30
CLARK	2
COOPER	30
CRAWFORD	18
DOUGLAS	18
DUNKLIN	9 21 49 30 33
FRANKLIN	18
GASCONADE	18
GREENE	2 30
HOWARD	18 30 46
JACKSON	2 30
JASPER	33
JEFFERSON	2 30
LAFAYETTE	2 30
LAWRENCE	2 18 30
LIVINGSTON	33
MONTGOMERY	2
NEWTON	2 30
PETTIS	2
PHELPS	18
PLATTE	2 46
RIPLEY	49
SCOTT	49 2 30
ST CLAIR	33
ST CHARLES	38 2 18 30
ST LOUIS	19 38 19 47 19
STONE	30
VERNON	33
WASHINGTON	2
WRIGHT	18
BOONE	46
CLAY	46
CLINTON	46

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR NEVADA

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
HUMBOLDT	1078	1078	647	431	505

COUNTY	CROPS USED TO ESTIMATE MIGRANT WORKERS
HUMBOLDT	36

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR NEW HAMPSHIRE

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
BELKNAP	49	42	13	29	34
CARROLL	38	28	9	19	23
CHESHIRE	28	20	6	14	16
GRAFTON	71	64	20	44	52
HILLSBOROUGH	898	659	204	455	532
MERRIMACK	154	103	32	71	83
ROCKINGHAM	407	301	93	208	243
STRATFORD	63	52	16	36	42
SULLIVAN	11	11	3	8	9

COUNTY	CROPS USED TO ESTIMATE MIGRANT WORKERS
BELKNAP	43 2 18 60
CARROLL	43 2 60
CHESHIRE	43 2
GRAFTON	43 2
HILLSBOROUGH	58 38 40 43 47 2 30 32 41
MERRIMACK	43 2 41
ROCKINGHAM	38 40 43 43 2 30 41
STRATFORD	43 2 60
SULLIVAN	2

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR NEW JERSEY

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
ATLANTIC	5698	4638	3432	1206	1411
BERGEN	42	42	31	11	13
BURLINGTON	858	551	408	143	168
CAMDEN	471	384	284	100	117
CAPE MAY	361	361	267	94	110
CUMBERLAND	2707	2077	1537	540	632
GLOUCESTER	3051	2329	1723	606	708
HUNTERDON	146	113	84	29	34
MERCER	125	57	42	15	17
MIDDLESEX	147	107	79	28	33
MONMOUTH	634	440	326	114	134
MORRIS	136	115	85	30	35
OCEAN	87	60	44	16	18
SALEM	1248	1105	818	287	336
SOMERSET	47	35	26	9	11
SUSSEX	477	395	292	103	120
WARREN	208	96	71	25	29

COUNTY	CROPS USED TO ESTIMATE MIGRANT WORKERS
ATLANTIC	39 6 8 9 11 19 15 16 67 68 24 19 51 52 19 40 43 47 49 2 18 30 60
BERGEN	47 2 30
BURLINGTON	4 39 6 8 9 11 19 15 58 19 43 47 19 49 2 30 41
CAMDEN	15 40 43 47 2 30
CAPE MAY	9 43 47 20
CUMBERLAND	4 39 57 6 8 9 19 15 16 67 68 24 19 70 51 52 19 40 43 47 54 19 49 30 41 20
GLOUCESTER	4 39 6 8 9 19 15 16 24 51 52 58 19 40 43 47 20 54 49 2 30
HUNTERDON	58 43 47 2 30
MERCER	58 43 47 2 18 41
MIDDLESEX	8 19 15 58 19 43 47 2 30
MONMOUTH	39 6 8 9 11 15 16 24 58 19 40 43 47 2 18 30 41
MORRIS	58 43 47 2
OCEAN	39 6 8 43 47 41
SALEM	4 39 6 8 9 19 15 16 69 24 19 51 19 40 43 47 54 49 2
SOMERSET	43 2 30
SUSSEX	15 58 43 47 2 30 41
WARREN	8 12 67 68 24 51 58 19 43 2 18 30

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR NEW MEXICO

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
BERNALILLO	37	32	4	28	33
CHAVES	91	91	12	79	93
DONA ANA	4483	1527	199	1328	1554
EDDY	27	27	4	23	27
GRANT	19	19	2	17	19
HIDALGO	41	41	5	36	42
LEA	53	53	7	46	54
LINCOLN	55	55	7	48	56
LUNA	522	261	34	227	266
OTERO	163	80	10	70	81
RIO ARRIBA	99	91	12	79	93
ROOSEVELT	486	440	57	383	448
SANDOVAL	34	34	4	30	35
SAN JUAN	105	72	9	63	73
SANTA FE	11	11	1	10	11
SIERRA	90	82	11	71	83
SOCORRO	0	0	0	0	0
VALENCIA	16	10	1	9	10
CURRY	150	111	14	97	113

COUNTY	CROPS USED TO ESTIMATE MIGRANT WORKERS
BERNALILLO	52 2 18
CHAVES	52 33
DONA ANA	15 24 28 52 58 47 2 18 33
EDDY	33
GRANT	2
HIDALGO	52 49
LEA	33
LINCOLN	2
LUNA	24 28 52 58 33
OTERO	2 30 32 33
RIO ARRIBA	52 2 30
ROOSEVELT	33 36 31
SANDOVAL	52 2
SAN JUAN	9 43 2
SANTA FE	2
SIERRA	52 58 2 33
SOCORRO	52
VALENCIA	52 2 18
CURRY	36 31

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR NEW YORK

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
ALBANY	101	84	64	20	24
ALLEGANY	29	29	22	7	8
BRONX	87	56	43	13	16
CATTARAUGUS	431	345	262	83	97
CAYUGA	881	632	480	152	177
CHAUTAUQUA	11246	11039	8390	2649	3100
CHEMUNG	384	336	255	81	94
CHENANGO	7	7	5	2	2
CLINTON	535	535	407	128	150
COLUMBIA	1415	1234	938	296	347
CORTLAND	11	11	8	3	3
DELAWARE	28	28	21	7	8
DUTCHESS	807	650	494	156	183
ERIE	4123	1774	1348	426	498
ESSEX	48	48	36	12	13
GENESEE	1279	1095	832	263	307
GREENE	45	45	34	11	13
HERKIMER	13	13	10	3	4
JEFFERSON	302	197	150	47	55
LIVINGSTON	1362	883	671	212	248
MADISON	484	484	368	116	136
MONROE	2259	1183	899	284	332
MONTGOMERY	47	34	26	8	10
NASSAU	12	12	9	3	3
NIAGARA	3839	2890	2196	694	812
ONEIDA	836	778	591	187	218
ONONDAGA	677	326	248	78	92
ONTARIO	2414	1893	1439	454	532
ORANGE	3700	3562	2707	855	1000
ORLEANS	3399	2463	1872	591	692
OSWEGO	993	656	499	157	184
OTSEGO	141	141	107	34	40
PUTNAM	23	23	17	6	6
RENSSALEAR	140	93	71	22	26
ROCKLAND	41	41	31	10	12
SARATOGA	154	154	117	37	43
SCHENECTADY	52	42	32	10	12
SCHOHARIE	69	69	52	17	19
SCHUYLER	1336	1303	990	313	366
SENECA	545	545	414	131	153
STEUBEN	1130	880	669	211	247
ST LAWRENCE	224	168	128	40	47
SUFFOLK*	4757	3748	2848	900	1052
SULLIVAN	21	21	16	5	6
TIOGA	12	12	9	3	3

TOMPKINS	44	44	33	11	12
ULSTER	2728	2564	1949	615	720
WARREN	5	5	4	1	1
WASHINGTON	176	121	92	29	34
WAYNE	6800	4927	3745	1182	1384
WESTCHESTER	96	81	62	19	23
WYOMING	912	834	634	200	234
YATES	4990	4662	3543	1119	1309
FRANKLIN	193	193	147	46	54

* LARGE NUMBER OF NURSERY AND GREENHOUSE PRODUCTS, NO AVAILABLE ESTIMATES

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COUNTY	CROPS USED TO ESTIMATE MIGRANT WORKERS
ALBANY	39 8 15 58 38 40 43 47
ALLEGANY	39 43
BRONX	43 2 41
CATTARAUGUS	43 18 36 60
CAYUGA	39 36 8 15 28 21 38 40 43 47 2 32 41
CHAUTAUQUA	11 43 47 2 13 18 30 41
CHEMUNG	43 36 2 41
CHENANGO	43
CLINTON	43 2 36
COLUMBIA	11 38 40 36 43 2 13 18 30 32 35 41
CORTLAND	8 43
DELAWARE	11 43 2
DUTCHESS	38 40 36 43 47 2 18 30 32 41
ERIE	39 36 6 8 9 11 15 24 58 38 40 43 47 2 13 18 41
ESSEX	2
GENESEE	39 8 28 36 21 43 2 41
GREENE	43 47 2
HERKIMER	43 2
JEFFERSON	43 2 41
LIVINGSTON	57 21 36 43 18 41
MADISON	28 43 36 2
MONROE	39 8 36 9 11 15 21 58 38 40 43 47 2 13 18 30 32 35 41
MONTGOMERY	43 2 41
NASSAU	43 47
NIAGARA	8 9 36 15 58 38 40 43 47 2 13 18 30 32 35 41
ONEIDA	39 8 36 21 43 2
ONONDAGA	8 9 11 58 40 43 47 2 41
ONTARIO	39 57 8 21 40 43 2 18 30 41
ORANGE	8 12 36 15 24 28 50 58 38 43 47 2 30 32 41
ORLEANS	39 36 8 15 28 58 40 43 47 2 30 32 41
OSWEGO	8 11 36 24 28 40 43 47 2 32 60 41
OTSEGO	43 2 18
PUTNAM	2
RENSSALEAR	11 43 47 2 41
ROCKLAND	43 47 2
SARATOGA	43 47 2
SCHENECTADY	11 21 43 2
SCHOHARIE	43 2
SCHUYLER	13 18 30
SENECA	43 47 2 18
STEUBEN	28 36 43 2 18 41
ST LAWRENCE	43 18 47 2 41
SUFFOLK*	39 6 66 36 8 9 11 19 15 67 16 68 24 19 51 28 58 38 53 19 40 43 47 2 18 30 32 41
SULLIVAN	43 2
TIOGA	43
TOMPKINS	43 2 36
ULSTER	39 9 38 43 47 2 13 18 30 32 41
WARREN	43
WASHINGTON	43 47 2 36 41

WAYNE	39	8	28	35	21	38	40	43	47	2	13	18	30	32	35
	41														
WESTCHESTER	38	43	47	2	30										
WYOMING	39	21	43	2	36										
YATES	39	57	8	10	36	21	2	18							
FRANKLIN	36														

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR N. CAROLINA

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
ALAMANCE	1617	1617	809	809	946
ALEXANDER	563	545	273	273	319
ALLEGHANY	284	284	142	142	166
ANSON	175	175	88	88	102
ASHE	940	917	459	459	536
AVERY	121	88	44	44	51
BEAUFORT	3155	3155	1578	1578	1846
BERTIE	2224	2224	1112	1112	1301
BLADEN	4228	2839	1420	1420	1661
BRUNSWICK	1603	1603	802	802	938
BUNCOMBE	1106	1148	574	574	672
CARTERET	599	574	287	287	336
CATAWBA	12	12	6	6	7
CHOWAN	705	703	352	352	411
CLEVELAND	291	176	88	88	103
COLUMBUS	9865	9790	4895	4895	5727
CRAVEN	3559	3254	1627	1627	1904
CUMBERLAND	2835	2776	1388	1388	1624
CURRITUCK	70	64	32	32	37
DAVIDSON	1073	1073	537	537	628
DAVIE	306	.306	153	153	179
DUPLIN	7355	6738	3369	3369	3942
DURHAM	1089	1089	545	545	637
EDGECOMBE	5195	5179	2590	2590	3030
FORSYTH	1534	1532	766	766	896
FRANKLIN	4152	4101	2051	2051	2399
GASTON	73	73	37	37	43
GRAHAM	171	171	86	86	100
GREENE	5230	5230	2615	2615	3060
GRANVILLE	4617	4617	2309	2309	2701
GUILFORD	3102	3102	1551	1551	1815
HALIFAX	2446	2388	1194	1194	1397
HARNETT	8163	8118	4059	4059	4749
HAYWOOD	820	690	345	345	404
HENDERSEN	1852	1789	895	895	1047
HERTFORD	1442	1428	714	714	835
HOKE	1074	1074	537	537	628
HYDE	197	197	99	99	115
IREDELL	385	385	193	193	225
JACKSON	49	38	19	19	22
JOHNSTON	9908	9861	4931	4931	5769
JONES	2381	2381	1191	1191	1393
LEE	1918	1918	959	959	1122
LENOIR	6728	6728	3364	3364	3936
LINCOLN	133	140	70	70	82

MACON	100	61	31	31	36
MADISON	1584	1584	792	792	927
MARTIN	3642	3620	1810	1810	2118
MCDOWELL	99	99	50	50	58
MECKLENBERG	5	5	3	3	3
MITCHELL	407	355	178	178	208
MONTGOMERY	412	394	197	197	230
MOORE	2020	2013	1007	1007	1178
NASH	8730	8730	4365	4365	5107
NEW HANOVER	72	72	36	36	42
NORTHHAMPTON	164	164	82	82	96
ONSLOW	2296	2250	1125	1125	1316
ORANGE	1183	1183	592	592	692
PAMLICO	535	507	254	254	297
PASQUOTANK	270	147	74	74	86
PENDER	1403	1370	685	685	801
PERQUIMANS	63	63	32	32	37
PITT	11313	11313	5657	5657	6618
POLK	162	162	81	81	95
RANDOLPH	823	823	412	412	481
RICHMOND	980	954	477	477	558
ROBESON	9390	9196	4598	4598	5380
ROCKINGHAM	4590	4549	2275	2275	2661
ROWAN	137	134	67	67	78
RUTHERFORD	49	33	17	17	19
SAMPSON	15244	10642	5321	5321	6226
SCOTLAND	474	474	237	237	277
STOKES	3739	3689	1845	1845	2158
SURRY	4382	4307	2154	2154	2520
VANCE	2770	2770	1385	1385	1620
WAKE	8422	8388	4194	4194	4907
WARREN	2045	2029	1015	1015	1187
WASHINGTON	321	321	161	161	188
WATAUGA	590	590	295	295	345
WAYNE	1299	938	469	469	549
WILKES	977	778	389	389	455
WILSON	9384	9384	4692	4692	5490
YADKIN	2822	2822	1411	1411	1651
YANCEY	846	837	419	419	490
BURKE	18	18	9	9	11
CAMDEN	109	109	55	55	64
PERSON	3798	3798	1899	1899	2222
TYRRELL	158	158	79	79	92
CASWELL	3180	3180	1590	1590	1860
CHATHAM	673	673	337	337	394

NASH	39 15 43 46
NEW HANOVER	46
NORTHHAMPTON	46 49
ONSLOW	46 44 15 18
ORANGE	46
PAMLICO	46 36 8
PASQUOTANK	8 36
PENDER	46 15 49 18
PERQUIMANS	44 49
PITT	46 15
POLK	2 30
RANDOLPH	46
RICHMOND	46 44 9 43 49
ROBESON	46 46 44 8 15 49
ROCKINGHAM	46 36 30 41
ROWAN	40 36 43 47 54
RUTHERFORD	39 9 38 49 2
SAMPSON	44 39 8 9 19 15 16 52 58 62 40 43 47 49 18 60 46 46
SCOTLAND	46 49
STOKES	46 2 41
SURRY	46 36 8 43 30 41
VANCE	46
WAKE	44 8 15 38 43 49 46 46
WARREN	46 44 15
WASHINGTON	46
WATAUGA	46 36
WAYNE	44 36 39 8 15 58 49 48 48
WILKES	46 36 15 2 30
WILSON	44 46 46
YADKIN	46 36
YANCEY	46 2
BURKE	2
CAMDEN	36
PERSON	46
TYRRELL	36
CASWELL	46
CHATHAM	46

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR OHIO

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
ADAMS	3493	3493	2305	1188	1390
ALLEN	15	15	10	5	6
ASHLAND	48	48	32	16	19
ASHTABULA	666	591	390	201	235
ATHENS	5	5	3	2	2
AUGLAIZE	40	40	26	14	16
BELMONT	47	47	31	16	19
BROWN	4183	4183	2761	1422	1664
BUTLER	16	16	11	5	6
CARROLL	8	8	5	3	3
CHAMPAIGN	11	11	7	4	4
CLARK	16	16	11	5	6
CLERMONT	1355	1355	894	461	539
CLINTON	14	14	9	5	6
COLUMBIANA	333	178	117	61	71
COSHOCTON	5	5	3	2	2
CUYAHOGA	52	37	24	13	15
DARKE	921	921	608	313	366
DEFIANCE	11	11	7	4	4
DELAWARE	27	27	18	9	11
ERIE	322	152	100	52	60
FAIEFIELD	91	91	60	31	36
FRANKLIN	34	34	22	12	14
FULTON	188	159	105	54	63
GALLIA	1500	1500	990	510	597
GEAUGA	52	52	34	18	21
GREENE	24	24	16	8	10
GUERNSEY	23	23	15	8	9
HAMILTON	109	68	45	23	27
HANCOCK	155	155	102	53	62
HENRY	101	101	67	34	40
HIGHLAND	984	984	649	335	391
HOCKING	16	16	11	5	6
HOLMES	9	9	6	3	4
HURON	366	328	216	112	130
JACKSON	99	99	65	34	39
JEFFERSON	17	17	11	6	7
KNOX	28	28	18	10	11
LAKE	221	110	73	37	44
LAWRENCE	486	486	321	165	193
LICKING	78	78	51	27	31
LOGAN	24	24	16	8	10
LORAIN	305	174	115	59	69
LUCAS	348	283	187	96	113
MAHONING	192	104	69	35	41

MARION	65	60	40	20	24
MEDINA	46	46	30	16	18
MEIGS	64	64	42	22	25
MERCER	14	14	9	5	6
MIAMI	200	200	132	68	80
MORGAN	22	22	15	7	9
MONTGOMERY	164	113	75	38	45
MORROW	6	6	4	2	2
MUSKINGUM	29	29	19	10	12
OTTAWA	528	370	244	126	147
PICKAWAY	18	18	12	6	7
PIKE	185	185	122	63	74
PORTAGE	227	150	99	51	60
PREBLE	142	142	94	48	56
PUTNAM	282	282	186	96	112
RICHLAND	48	48	32	16	19
ROSS	27	27	18	9	11
SANDUSKY	974	947	625	322	377
SCIOTO	398	398	263	135	158
SENECA	344	344	227	117	137
STARK	242	134	88	46	53
SUMMIT	189	183	121	62	73
TRUMBULL	127	67	44	23	27
TUSCARAWAS	18	18	12	6	7
WARREN	228	118	78	40	47
WASHINGTON	101	101	67	34	40
WAYNE	112	59	39	20	23
WILLIAMS	73	73	48	25	29
WOOD	537	487	321	166	194

COUNTY	CROPS USED TO ESTIMATE MIGRANT WORKERS
ADAMS	46 2
ALLEN	43 2
ASHLAND	39 43 2 30
ASHTABULA	43 2 18 30 32 41
ATHENS	2
AUGLAIZE	47
BELMONT	43 2 30
BROWN	46 43
BUTLER	43 2
CARROLL	2
CHAMPAIGN	43
CLARK	43 2
CLERMONT	46 43 2
CLINTON	43 2
COLUMBIANA	43 2 30 41
COSHOCTON	2
CUYAHOGA	43 2 13
DARKE	46 43 47 2
DEFIANCE	43 2
DELAWARE	43 2
ERIE	8 9 38 43 2 18 30 41
FAIEFIELD	43 2
FRANKLIN	39 43
FULTON	9 15 43 47 2 41
GALLIA	46
GEAUGA	43 2 32
GREENE	43 2
GUERNSEY	2
HAMILTON	43 2 41
HANCOCK	15 43 47
HENRY	47 2
HIGHLAND	46 2
HOCKING	2
HOLMES	2
HURON	12 19 69 24 19 28 40 43 2
JACKSON	46 2
JEFFERSON	43 2
KNOX	43 2
LAKE	39 43 2 18 30 41
LAWRENCE	46 43 2
LICKING	43 2 30
LOGAN	2
LORAIN	8 58 43 47 2 18 30 60 41
LUCAS	8 9 15 58 40 43 47 2 30 41
MAHONING	39 8 58 43 47 2 41
MARION	2 41
MEDINA	43 2
MEIGS	8 43 47 2
MERCER	39 47
MIAMI	46 2
MORGAN	2 30

MONTGOMERY	39 43 2 41
MORROW	2
MUSKINGUM	43 2
OTTAWA	15 47 2 18 30
PICKAWAY	43
PIKE	46
PORTAGE	43 2 41
PREBLE	46 2
PUTNAM	15 47
RICHLAND	43 2
ROSS	43 2
SANDUSKY	39 8 9 15 43 47 2 13 30
SCIOTO	46 43 2
SENECA	8 9 15 43 47
STARK	24 53 43 2 30 41
SUMMIT	24 50 38 38 43 2
TRUMBULL	43 2 30 60 41
TUSCARAWAS	43 2
WARREN	46 39 38 43 2 41
WASHINGTON	8 9 58 43 47 2 30
WAYNE	43 2 30 41
WILLIAMS	15 47
WOOD	15 43 47 41

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR OKLAHOMA

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
ADAIR	72	41	23	18	22
AFOKA	119	112	62	50	59
BRYAN	502	436	240	196	230
CADDO	843	652	359	293	343
CARTER	117	117	64	53	62
CHEROKEE	6	6	3	3	3
CHOCTAW	22	22	12	10	12
CLEVELAND	8	8	4	4	4
COAL	18	18	10	8	9
COMANCHE	37	37	20	17	19
COTTON	20	20	11	9	11
CRAIG	58	48	26	22	25
CREEK	59	59	32	27	31
DELAWARE	37	37	20	17	19
GARFIELD	121	97	53	44	51
GRADY	90	54	30	24	28
HUGHES	181	181	100	81	95
JEFFERSON	240	116	64	52	61
JOHNSTON	88	88	48	40	46
KAY	19	11	6	5	6
KIOWA	8	8	4	4	4
LE FLORE	143	82	45	37	43
LINCOLN	89	89	49	40	47
LOGAN	22	17	9	8	9
LOVE	189	189	104	85	100
MARSHALL	105	105	58	47	55
MAYES	33	33	18	15	17
MCCLAIN	88	57	31	26	30
MCINTOSH	117	66	36	30	35
MCCURTAIN	33	33	18	15	17
MURRAY	50	50	28	23	26
MUSKOGEE	56	30	17	14	16
NOBLE	11	11	6	5	6
NOWATA	20	20	11	9	11
OKFUSKEE	170	170	94	77	90
OKLAHOMA	21	21	12	9	11
OKMULGEE	250	250	138	113	132
OSAGE	21	21	12	9	11
OTTAWA	74	74	41	33	39
PAWNEE	7	7	4	3	4
PAYNE	20	20	11	9	11
PITTSBURG	54	54	30	24	28
PONTOTOC	133	92	51	41	48
POTTAWATOMIE	124	124	68	56	65
ROGERS	95	95	52	43	50

SEMINOLE	107	77	42	35	41
SEQUOYAH	48	31	17	14	16
STEPHENS	109	109	60	49	57
TILLMAN	5	5	3	2	3
TULSA	489	297	163	134	156
WAGONER	240	135	74	61	71
WASHINGTON	89	89	49	40	47
BECKHAM	9	9	5	4	5
CUSTER	10	10	6	5	5
GARVIN	22	22	12	10	12
GREER	2	2	1	1	1
HARMON	2	2	1	1	1
JACKSON	16	16	9	7	8
WASHITA	23	23	13	10	12

COUNTY	CROPS USED TO ESTIMATE MIGRANT WORKERS
ADAIR	30 41
ATOKA	49 33 31
BRYAN	49 30 33 31
CADDO	49 36 31
CARTER	33 31
CHEROKEE	33
CHOCTAW	33 31
CLEVELAND	33
COAL	33
COMANCHE	33 31
COTTON	33
CRAIG	39 33
CREEK	33
DELAWARE	39
GARFIELD	30 33
GRADY	9 49 31
HUGHES	33 31
JEFFERSON	9 49 33
JOHNSTON	33 31
KAY	49 33
KIOWA	33 31
LE FLORE	2 30 33
LINCOLN	33 31
LOGAN	49 30 33
LOVE	33 31
MARSHALL	33 31
MAYES	33
MCCLAIN	49 30 33 31
MCINTOSH	9 49 33 31
MCCURTAIN	33
MURRAY	33
MUSKOGEE	2 33 31
NOBLE	33
NOWATA	33
OKFUSKEE	33 31
OKLAHOMA	33 31
OKMULGEE	33 31
OSAGE	33
OTTAWA	33
PAWNEE	33
PAYNE	33 31
PITTSBURG	33 31
PONTOTOC	2 30 33 31
POTTAWATOMIE	33 31
ROGERS	33
SEMINOLE	30 33 31
SEQUOYAH	2 30 33
STEPHENS	33 31
TILLMAN	33
TULSA	39 9 15 49 33 8
WAGONER	49 2 30 33
WASHINGTON	33

BECKHAM	31
CUSTER	31
CARVIN	31
GREER	31
HARMON	31
JACKSON	31
WASHITA	31

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR OREGON

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
BENTON	1001	735	184	551	645
CLACKAMAS	5211	4170	1043	3128	3659
COLUMBIA	267	232	58	174	204
COOS	116	116	29	87	102
CURRY	13	13	3	10	11
DOUGLAS	407	262	66	197	230
GRANT	11	11	3	8	10
HOOD RIVER	2085	2006	502	1505	1760
JACKSON	1532	1516	379	1137	1330
JEFFERSON	121	121	30	91	106
JOSEPHINE	8	4	1	3	4
KLAMATH	971	957	239	718	840
LANE	1772	1102	276	827	967
LINCOLN	5	5	1	4	4
MALHEUR	4141	3374	844	2531	2961
MARION	9468	5643	1411	4232	4952
MULTNOMAH	1901	1580	395	1185	1386
POLK	1410	610	153	458	535
UMATILLA	2938	1574	394	1181	1381
UNION	131	131	33	98	115
WASCO	771	674	169	506	591
WASHINGTON	4280	2386	597	1790	2094
YAMHILL	2310	974	244	731	855
LINN	1329	926	232	695	813
CROOK	126	126	32	95	111
DESCHUTES	46	46	12	35	40
MORROW	1109	1109	277	832	973
WALLOWA	50	50	13	38	44

COUNTY	CROPS USED TO ESTIMATE MIGRANT WORKERS
BENTON	21 43 2 13 30 35 63 48 65 41 61 57 18 60 39
CLACKAMAS	39 6 8 11 15 24 28 50 21 38 53 59 19 40 43 2 30 63 48 7 64 61 41 18 35
COLUMBIA	41 60 36
COOS	2 14
CURRY	14
DOUGLAS	9 11 43 47 49 2 61 13 30 32 39 41 35 63 64 48
GRANT	2
HOOD RIVER	2 13 32 30 41
JACKSON	43 2 30 41 32 48 13
JEFFERSON	17 36
JOSEPHINE	48 13 32
KLAMATH	2 36
LANE	10 36 11 43 47 2 61 13 60 30 63 48 7 41 57 32 39 35
LINCOLN	2
MALHEUR	28 36 43 2
MARION	6 36 8 10 11 15 24 28 50 21 40 43 2 13 30 32 35 63 48 7 60 64 65 61 41 39 57
MULTNOMAH	6 36 8 10 11 15 60 24 38 43 30 63 7 61 39 41
POLK	11 40 43 2 13 39 30 64 61 35 63 7 41 32
UMATILLA	39 10 36 28 21 43 49 2 13 30 35 18 32
UNION	13 36
WASCO	2 3 13 30 32 18
WASHINGTON	39 6 15 28 43 2 13 30 32 35 63 48 7 60 64 61 41
YAMHILL	6 11 28 40 43 2 13 30 35 63 60 48 7 41 39 57
LINN	41 61 60 63 48 30 32 35 39 17 21 18 13 2 40 43
CROOK	36
DESCHUTES	36
MORROW	36
WALLOWA	36

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR PENNSYLVANIA

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
ADAMS	3279	2954	2186	768	899
ALLEGHENY	65	60	44	16	18
ARMSTRONG	34	34	25	9	10
BEAVER	43	43	32	11	13
BEDFORD	132	127	94	33	39
BERKS*	627	542	401	141	165
BLAIR	112	112	83	29	34
BRADFORD	39	39	29	10	12
BUCKS	356	198	147	51	60
BUTLER	192	156	115	41	47
CAMBRIA	20	20	15	5	6
CARBON	9	9	7	2	3
CENTRE	140	140	104	36	43
CHESTER*	434	361	267	94	110
CLARION	48	35	26	9	11
CLEARFIELD	17	17	13	4	5
CLINTON	26	26	19	7	8
COLUMBIA	282	210	155	55	64
CRAWFORD	48	30	22	8	9
CUMBERLAND	319	251	186	65	76
DAUPHIN	128	100	74	26	30
DELAWARE	24	24	18	6	7
ERIE	2514	2274	1683	591	692
FAYETTE	28	28	21	7	9
FRANKLIN	1334	1274	943	331	388
GREENE	26	26	19	7	8
HUNTINGDON	18	18	13	5	5
INDIANA	87	45	33	12	14
JEFFERSON	12	12	9	3	4
JUNIATA	166	143	106	37	44
LACKAWANNA	167	161	119	42	49
LANCASTER	8661	8343	6174	2169	2538
LAWRENCE	22	22	16	6	7
LEBANON	311	284	210	74	86
LEHIGH	450	414	306	108	126
LUZERNE	287	198	147	51	60
LYCOMING	177	97	72	25	30
MCKEAN	9	9	7	2	3
MERCER	133	68	50	18	21
MIFFLIN	38	38	28	10	12
MONROE	48	48	36	12	15
MONTOUR	21	21	16	5	6
MONTGOMERY	94	94	70	24	29
NORTHAMPTON	283	183	135	48	56
NORTHUMBERLAND	205	149	110	39	45

PERRY	53	51	38	13	16
POTTER	3	3	2	1	1
SCHUYLKILL	201	145	107	38	44
SNYDER	321	257	190	67	78
SOMERSET	91	91	67	24	28
SUSQUEHANNA	15	15	11	4	5
TIOGA	31	31	23	8	9
UNION	22	22	16	6	7
VENANGO	25	25	19	7	8
WARREN	13	13	10	3	4
WASHINGTON	122	93	69	24	28
WAYNE	17	17	13	4	5
WESTMORELAND	74	74	55	19	23
WYOMING	33	33	24	9	10
YORK	1214	1033	764	269	314

* LARGE MUSHROOM GROWING AREA, NO ESTIMATES AVAILABLE.

COUNTY	CROPS USED TO ESTIMATE MIGRANT WORKERS
ADAMS	43 36 47 2 13 18 26 30 32 35 41
ALLEGHENY	43 36 47 2 18
ARMSTRONG	43 2 36
BEAVER	43 36 2
BEDFORD	43 36 2 13 32
BERKS	38 13 43 47 2 18 30 32 46 36 41
BLAIR	43 2
BRADFORD	43 36 2
BUCKS	9 36 38 43 47 54 2 30 41
BUTLER	43 36 47 2 41
CAMBRIA	43 36 2
CARBON	43 36
CENTRE	39 43 36 46 2
CHESTER	38 13 36 46 43 47 2 18 30 41
CLARION	43 2 41
CLEARFIELD	43 2 36
CLINTON	43 36 47
COLUMBIA	39 8 13 36 38 40 43 47 2 30 41
CRAWFORD	43 2 36 41
CUMBERLAND	9 36 43 47 13 2 46 18 30 41
DAUPHIN	43 47 2 61 30 36 41
DELAWARE	43 2 30
ERIE	8 61 36 43 47 2 13 60 18 30 32 41
FAYETTE	43 36 2
FRANKLIN	38 36 43 47 2 13 26 30 32 41
GREENE	43 36 2
HUNTINGDON	43 36 2
INDIANA	8 43 2 36 41
JEFFERSON	43 36 2
JUNIATA	43 2 30 36 13 41
LACKAWANNA	38 36 43 47 2
LANCASTER	8 46 9 11 61 12 38 40 43 47 54 2 13 18 30 32 41 36
LAWRENCE	43 2
LEBANON	38 36 13 43 46 2 30 41
LEHIGH	43 36 13 2 30 32 41
LUZERNE	8 36 60 13 58 38 43 47 2 18 41
LYCOMING	39 43 13 36 47 2 30 41
MCKEAN	2 60
MERCER	15 36 43 2 41
MIFFLIN	43 2 30
MONROE	39 43 47 2
MONTOUR	43 2
MONTGOMERY	43 2 30
NORTHAMPTON	39 36 8 13 21 40 43 2 18 30 41
NORTHUMBERLAND	43 47 36 13 2 30 41
PERRY	43 13 36 2 30
POTTER	43 36
SCHUYLKILL	8 36 58 38 40 43 47 2 30
SNYDER	9 36 13 40 46 43 2 30 41
SOMERSET	43 36 47 2
SUSQUEHANNA	43 2 60

TIOGA	2
UNION	43 47
VENANGO	43 36 2
WARREN	43 2
WASHINGTON	43 36 47 2 41
WAYNE	2
WESTMORELAND	43 2 36
WYOMING	43 47 2
YORK	39 36 60 46 61 9 43 47 2 13 18 26 30 32 41

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR S. CAROLINA

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
ABBEVILLE	9	9	3	6	7
AIKEN	456	314	104	210	246
ALLENDALE	74	74	24	50	58
ANDERSON	22	9	3	6	7
BAMBERG	169	102	34	68	80
BARNWELL	644	337	111	226	264
BEAUFORT	959	927	306	621	727
BERKELEY	168	168	55	113	132
CALHOUN	54	54	18	36	42
CHARLESTON	1091	1041	344	697	816
CHESTERFIELD	828	712	235	477	558
CHEROKEE	419	396	131	265	310
CLARENDON	3180	2094	691	1403	1641
COLLETON	159	159	52	107	125
DARLINGTON	3409	2747	907	1840	2153
DILLON	3149	2854	942	1912	2237
DORCHESTER	325	319	105	214	250
EDGFIELD	1822	1822	601	1221	1428
FLORENCE	7089	6645	2193	4452	5209
GEORGETOWN	809	809	267	542	634
GREENVILLE	259	230	76	154	180
HAMPTON	131	131	43	88	103
HORRY	10522	7897	2606	5291	6190
JASPER	6	6	2	4	5
KERSHAW	4	4	1	3	3
LANCASTER	3	3	1	2	2
LAURENS	3	3	1	2	2
LEE	441	441	146	295	346
LEXINGTON	407	234	77	157	183
MARLBORO	348	328	108	220	257
MARION	3248	3124	1031	2093	2449
OCONEE	195	195	64	131	153
ORANGEBURG	1318	824	272	552	646
PICKENS	28	20	7	13	16
RICHLAND	12	12	4	8	9
SALUDA	534	507	167	340	397
SPARTANBURG	2352	1956	645	1311	1533
SUMTER	707	671	221	450	526
WILLIAMSBURG	4051	4002	1321	2681	3137
YORK	78	74	24	50	58

COUNTY	CROPS USED TO ESTIMATE MIGRANT WORKERS
ABBEVILLE	33
AIKEN	44 31 21 15 49 30 33
ALLENDALE	31 49
ANDERSON	40 2 33
BAMBERG	31 9 15 49 33
BARNWELL	44 31 9 15 49 30 33
BEAUFORT	19 15 47 47 19 49 33
BERKELEY	46
CALHOUN	33
CHARLESTON	39 8 9 19 15 47 49 33
CHESTERFIELD	46 44 49 30 33
CHEROKEE	2 30
CLARENDON	46 44 31 15
COLLETON	46 49
DARLINGTON	46 44 49 33
DILLON	46 15
DORCHESTER	46 39 33
EDGFIELD	30
FLORENCE	46 44 31 15 49 33
GEORGETOWN	46
GREENVILLE	39 21 40 2 30 33
HAMPTON	31 49
HORRY	46 44 39 8 15 58 40 49
JASPER	49
KERSHAW	49
LANCASTER	49
LAURENS	33
LEE	46 31 30
LEXINGTON	44 31 19 21 19 54 19 49 18 30 33
MARLBORO	46 15 49
MARION	46 44
OCONEE	2 26
ORANGEBURG	46 44 31 39 9 19 21 15 58 40 49 30 33
PICKENS	39 40 2
RICHLAND	33
SALUDA	30 33
SPARTANBURG	9 40 49 2 18 30
SUMTER	46 31 15 33
WILLIAMSBURG	46 15
YORK	40 30 33

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR TENNESSEE

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
ANDERSON	139	139	7	132	154
BEDFORD	198	198	10	188	220
BLEDSOE	110	59	3	56	66
BLOUNT	524	509	25	484	566
BRADLEY	118	60	3	57	67
CAMPBELL	382	382	19	363	425
CANNON	297	297	15	282	330
CARTER	762	762	38	724	847
CHEATHAM	1097	1088	54	1034	1209
CLAIBORNE	2153	2153	108	2045	2393
CLAY	663	663	33	630	737
COCKE	1641	1583	79	1504	1760
COFFEE	0	0	0	0	0
CROCKETT	50	50	3	48	56
CUMBERLAND	16	16	1	15	18
DAVIDSON	212	212	11	201	236
DECATUR	3	3	0	3	3
DE KALB	841	832	42	790	925
DICKSON	902	902	45	857	1003
DYER	3	3	0	3	3
FAYETTE	90	90	5	86	100
FENTRESS	412	412	21	391	458
FRANKLIN	159	159	8	151	177
GIBSON	393	263	13	250	292
GILES	445	431	22	409	479
GRAINGER	1344	1344	67	1277	1494
GREENE	4809	4809	240	4569	5345
GRUNDY	0	0	0	0	0
HAMILTON	22	13	1	12	14
HANCOCK	992	992	50	942	1103
HARDEMAN	64	36	2	34	40
HAWKINS	2344	2344	117	2227	2605
HAYWOOD	29	15	1	14	17
HENDERSON	414	414	21	393	460
HICKMAN	262	262	13	249	291
HOUSTON	177	177	9	168	197
JACKSON	1038	1038	52	986	1154
JEFFERSON	1175	1175	59	1116	1306
JOHNSON	1090	1090	55	1036	1212
KNOX	1072	1063	53	1010	1182
LAUDERDALE	117	85	4	81	94
LAWRENCE	274	235	12	223	261
LEWIS	31	31	2	29	34
LINCOLN	1173	1135	57	1078	1262
LOUDON	553	536	27	509	596

MACON	1778	1778	89	1689	1976
MADISON	9	9	0	9	10
MARSHALL	672	672	34	638	747
MAURY	1952	1952	98	1854	2170
MCMINN	608	608	30	578	676
MCNAIRY	27	27	1	26	30
MEIGS	244	244	12	232	271
MONROE	830	830	42	789	923
MOORE	155	155	8	147	172
MORGAN	77	77	4	73	86
MONTGOMERY	2887	2887	144	2743	3209
OBION	119	70	4	67	78
OVERTON	442	442	22	420	491
PICKETT	396	396	20	376	440
POLK	24	24	1	23	27
PUTNAM	1027	1027	51	976	1142
RHEA	137	99	5	94	110
ROANE	237	237	12	225	263
ROBERTSON	5787	5780	289	5491	6424
RUTHERFORD	165	165	8	157	183
SCOTT	29	29	1	28	32
SEVIER	1028	1028	51	977	1143
SHELBY	65	52	3	49	58
SMITH	2217	2217	111	2106	2464
STEWART	.869	869	43	826	966
SULLIVAN	1500	1500	75	1425	1667
SUMNER	3017	3008	150	2858	3343
TIPTON	577	539	27	512	599
TROUSDALE	1103	1103	55	1048	1226
UNICOI	461	461	23	438	512
UNION	645	645	32	613	717
VAN BUREN	49	49	2	47	54
WARREN	2975	2965	148	2817	3296
WASHINGTON	2233	2233	112	2121	2482
WEAKLEY	179	179	9	170	199
WHITE	800	800	40	760	889
WILLIAMSON	1253	1242	62	1180	1380
WILSON	1170	1170	59	1112	1300
HAMBLEN	868	868	43	825	965

COUNTY	CROPS USED TO ESTIMATE MIGRANT WORKERS
ANDERSON	46
BEDFORD	46
BLEDSOE	8 38 47 2
BLOUNT	46 49 2 30
BRADLEY	46 18
CAMPBELL	46
CANNON	46 62
CARTER	46
CHEATHAM	46 30
CLAIBORNE	46
CLAY	46
COCKE	46 8 47 2
COFFEE	62
CROCKETT	19 46
CUMBERLAND	39 2
DAVIDSON	46 19
DECATUR	31
DE KALB	46 2 30
DICKSON	46 2
DYER	19 33
FAYETTE	21
FENTRESS	46 39
FRANKLIN	46
GIBSON	44 15 62 30
GILES	46 18
GRAINGER	46 47
GREENE	46 2
GRUNDY	62
HAMILTON	2 30
HANCOCK	46
HARDEMAN	21 30
HAWKINS	46
HAYWOOD	21 40 47 33
HENDERSON	46
HICKMAN	46
HOUSTON	46
JACKSON	46
JEFFERSON	46 47
JOHNSON	46
KNOX	46 46 39 2 30
LAUDERDALE	44 47
LAWRENCE	46 31 62 2 30
LEWIS	46
LINCOLN	46 46 9 62 49 2 30
LOUDON	46 30
MACON	46
MADISON	30
MARSHALL	46
MAURY	46 2
MCMINN	46
MCNAIRY	62 40 30
MEIGS	46
MONROE	46

MOORE	46
MORGAN	46
MONTGOMERY	46
OBION	2 30
OVERTON	46
PICKETT	46
POLK	46
PUTNAM	46
RHEA	46 8 58 38 47
ROANE	46
ROBERTSON	46 30
RUTHERFORD	46
SCOTT	46
SEVIER	46 2
SHELBY	21 19 2 30
SMITH	46
STEWART	46
SULLIVAN	46
SUMNER	46 2 30
TIPTON	46 21 30
TROUSDALE	46
UNICOI	46 2
UNION	46
VAN BUREN	46
WARREN	46 62 30
WASHINGTON	46 2
WEAKLEY	46 46
WHITE	46
WILLIAMSON	46 2 30
WILSON	46
HAMBLEN	46

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR TEXAS

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
ANDERSON	107	74	37	37	43
ANGELINA	3	3	2	2	2
ATASCOSA	674	450	225	225	263
AUSTIN	43	33	17	17	19
BAILEY	40	32	16	16	19
BANDERA	12	11	6	6	6
BASTROP	162	94	47	47	55
BELL	99	90	45	45	53
BEXAR	415	154	77	77	90
BLANCO	13	8	4	4	5
BOSQUE	45	44	22	22	26
BOWIE	52	52	26	26	30
BRAZORIA	439	217	109	109	127
BROWN	244	243	122	122	142
BRAZOS	10	10	5	5	6
BURNET	46	40	20	20	23
BURLESON	44	42	21	21	25
CALLAHAN	105	100	50	50	58
CALHOUN	1	1	1	1	1
CALDWELL	62	57	29	29	33
CAMERON	3952	1967	984	984	1151
CAMP	12	10	5	5	6
CASS	12	8	4	4	5
CASTRO	405	304	152	152	178
CHEROKEE	64	51	26	26	30
CLAY	64	51	26	26	30
COLORADO	7	7	4	4	4
COLEMAN	4	4	2	2	2
COKE	4	4	2	2	2
COLLIN	75	55	28	28	32
COMANCHE	1846	1699	850	850	994
CONCHO	6	6	3	3	4
COOKE	136	136	68	68	80
CORYELL	65	65	33	33	38
CROSBY	4	2	1	1	1
DALLAS	27	27	14	14	16
DEAF SMITH	285	147	74	74	86
DENTON	148	147	74	74	86
DE WITT	89	89	45	45	52
DICKENS	2	2	1	1	1
DIMMIT	87	87	44	44	51
DONLEY	20	15	8	8	9
DUVAL	117	103	52	52	60
EASTLAND	897	867	434	434	507
ECTOR	12	12	6	6	7

ELLIS	24	24	12	12	14
EL PASO	414	314	157	157	184
ERATH	338	321	161	161	188
FALLS	42	41	21	21	24
FANNIN	243	234	117	117	137
FAYETTE	133	131	66	66	77
FISHER	7	7	4	4	4
FLOYD	263	263	132	132	154
FORT BEND	65	56	28	28	33
FRANKLIN	2	2	1	1	1
FREESTONE	18	18	9	9	11
FRIO	954	599	300	300	350
GAINES	524	239	120	120	140
GALVESTON	22	22	11	11	13
GILLESPIE	210	174	87	87	102
GLASSCOCK	11	7	4	4	4
GOLIAD	8	8	4	4	5
GONZALES	376	288	144	144	168
GRAYSON	169	162	81	81	95
GREGG	1	1	1	1	1
GRIMES	12	7	4	4	4
GUADALUPE	156	123	62	62	72
HALL	12	9	5	5	5
HARDIN	2	2	1	1	1
HASKELL	3	3	2	2	2
HALE	485	444	222	222	260
HAMILTON	79	79	40	40	46
HARRIS	125	82	41	41	48
HARRISON	9	4	2	2	2
HARTLEY	8	8	4	4	5
HAYS	12	8	4	4	5
HENDERSON	178	111	56	56	65
HIDALGO	32860	12260	6130	6130	7170
HILL	126	126	63	63	74
HOCKLEY	5	5	3	3	3
HOOD	305	297	149	149	174
HOPKINS	68	63	32	32	37
HOUSTON	100	79	40	40	46
HOWARD	4	4	2	2	2
HUNT	170	170	85	85	99
IRION	6	6	3	3	4
JACK	12	12	6	6	7
JACKSON	39	39	20	20	23
JASPER	7	5	3	3	3
JEFF DAVIS	2	2	1	1	1
JEFFERSON	4	4	2	2	2
JIM HOGG	18	18	9	9	11
JIM WELLS	89	89	45	45	52
JOHNSON	80	72	36	36	42
JONES	50	34	17	17	20
KARNES	8	6	3	3	4
KAUFMAN	38	25	13	13	15
KENDALL	7	7	4	4	4
KERR	18	18	9	9	11
KIMBLE	90	90	45	45	53
KLEBERG	144	144	72	72	84

KNOX	47	40	20	20	23
LAMAR	100	97	49	49	57
LAMB	46	46	23	23	27
LAMPASAS	178	134	67	67	78
LA SALLE	23	23	12	12	13
LAVACA	84	81	41	41	47
LEE	235	235	118	118	137
LEON	17	15	8	8	9
LIBERTY	5	5	3	3	3
LIMESTONE	59	31	16	16	18
LLANA	34	34	17	17	20
LUBBOCK	69	57	29	29	33
MADISON	17	17	9	9	10
MARTIN	1	1	1	1	1
MASON	174	168	84	84	98
MAVERICK	192	167	84	84	98
MCLENNAN	39	34	17	17	20
MEDINA	212	126	63	63	74
MENARD	40	40	20	20	23
MILAM	77	65	33	33	38
MIDLAND	21	21	11	11	12
MILLS	120	120	60	60	70
MITCHELL	1	1	1	1	1
MONTAGUE	169	95	48	48	56
MORRIS	1	1	1	1	1
MONTGOMERY	3	3	2	2	2
NACOGDOCHES	45	43	22	22	25
NAVARRO	77	77	39	39	45
NEWTON	2	1	1	1	1
NOLAN	3	3	2	2	2
PARMER	214	161	81	81	94
PANOLA	4	2	1	1	1
PALO PINTO	120	112	56	56	66
PARKER	270	199	100	100	116
PECOS	97	97	49	49	57
POLK	3	2	1	1	1
PRESIDO	121	120	60	60	70
RAINS	852	852	426	426	498
RANDALL	0	0	0	0	0
REAGAN	4	4	2	2	2
RED RIVER	24	19	10	10	11
REEVES	8	8	4	4	5
REAL	13	13	7	7	8
ROBERTSON	14	7	4	4	4
RUNNELS	12	12	6	6	7
RUSK	89	85	43	43	50
SAN AUGUSTINE	5	4	2	2	2
WILSON	20	20	10	10	12
SAN JACINTO	2	2	1	1	1
SAN SABA	326	325	163	163	190
SCURRY	2	2	1	1	1
SHACKELFORD	1	1	1	1	1
SHELBY	45	44	22	22	26
SMITH	101	52	26	26	30
SOMERVELL	48	46	23	23	27

STARR	821	821	411	411	480
STERLING	1	1	1	1	1
SUTTON	6	6	3	3	4
TARRANT	35	31	16	16	18
TAYLOR	10	10	5	5	6
TERRELL	4	3	2	2	2
TERRY	33	33	17	17	19
TOM GREEN	18	18	9	9	11
TRAVIS	56	53	27	27	31
TRINITY	4	4	2	2	2
TYLER	0	0	0	0	0
UPSHUR	5	5	3	3	3
UVALDE	432	262	131	131	153
VAL VERDE	1	1	1	1	1
VAN ZANDT	2156	2127	1064	1064	1244
VICTORIA	16	16	8	8	9
WALLER	191	184	92	92	108
WALKER	2	2	1	1	1
WARD	2	2	1	1	1
WASHINGTON	25	25	13	13	15
WEBB	23	23	12	12	13
WHARTON	70	70	35	35	41
WHEELER	2	2	1	1	1
WICHITA	7	4	2	2	2
WILLIAMSON	1126	1050	525	525	614
WILBARGER	6	6	3	3	4
WISE	240	177	89	89	104
WILLACY	183	116	58	58	68
WOOD	1065	1059	530	530	620
YOAKUM	6	6	3	3	4
YOUNG	19	19	10	10	11
ZAPATA	13	13	7	7	8
ZAVALA	1544	945	473	473	553
WILSON	493	493	247	247	288

COUNTY	CROPS USED TO ESTIMATE MIGRANT WORKERS
ANDERSON	36 39 9 21 21 40 43 49 30 33 33
ANGELINA	21 30
ATASCOSA	39 9 21 15 19 21 52 19 40 43 47 54 49 30 33
AUSTIN	49 49 33
BAILEY	36 47 49
BANDERA	49 33
BASTROP	44 49 49 33
BELL	30 33
BEXAR	36 39 57 8 10 19 50 70 51 58 40 47 49 30 33
BLANCO	49 33
BOSQUE	49 33
BOWIE	33
BRAZORIA	36 44 39 9 21 15 24 19 70 21 40 47 54 19 49 33
BROWN	49 33
BRAZOS	33
BURNET	49 33
BURLESON	49 33
CALLAHAN	30 33
CALHOUN	33
CALDWELL	49 33
CAMERON	42 6 8 10 15 24 28 70 58 40 47 49 55 29 33
CAMP	30 33
CASS	21 21 49 33
CASTRO	36 10 15 24 28
CHEROKEE	39 21 21 47 49 30 33
CLAY	49 30 33
COLORADO	33
COLEMAN	33
COKE	33
COLLIN	9 70 40 30 33
COMANCHE	9 21 49 30 33
CONCHO	33
COOKE	33 33
CORYELL	33
CROSBY	40 33
DALLAS	33
DEAF SMITH	36 10 24 28
DENTON	21 33
DE WITT	33
DICKENS	33
DIMMIT	9 28
DONLEY	49 30
DUVAL	49
EASTLAND	9 49 30 33
ECTOR	33
ELLIS	33
EL PASO	24 28 52 43 33
ERATH	9 49 30 33
FALLS	47 49 33
FANNIN	30 33
FAYETTE	30 33

FISHER	33
FLOYD	15 28 50 58
FORT BEND	49 33 40 43
FRANKLIN	30
FREESTONE	43 30
FRIO	36 9 21 19 49
GAINES	36 39 33
GALVESTON	24 33
GILLESPIE	40 30 33
GLASSCOCK	49 33
GOLIAD	33
GONZALES	49 33
GRAYSON	21 30 33
GREGG	21 21 33
GRIMES	49 33
GUADALUPE	49 30 33
HALL	49
HARDIN	33
HASKELL	33
HALE	36 10 15 28 50 52 58 47 49 33
HAMILTON	33
HARRIS	19 21 15 16 19 21 40 43 54 33
HARRISON	8 21 49 33
HARTLEY	21
HAYS	30 33
HENDERSON	44 39 9 21 21 49 30 33
HIDALGO	36 42 42 42 39 57 6 8 8 9 9 10 12 19 21
	15 16 25 69 24 19 28 28 50 70 51 52 58 19 40
	43 47 54 54 49 55 55 55 55 55 29 29 29 33
HILL	33
HOCKLEY	33
HOOD	30 33
HOPKINS	44 21 33
HOUSTON	21 21 43 49 30 33
HOWARD	33
HUNT	9 50 70 30
IRION	33
JACK	33
JACKSON	33
JASPER	21 21 43 33
JEFF DAVIS	33
JEFFERSON	33
JIM HOGG	49
JIM WELLS	49
JOHNSON	49 30 33
JONES	49 33
KARNES	49 33
KAUFMAN	9 49 30 33
KENDALL	33
KERR	33
KIMBLE	33
KLEBERG	15 40 49
KNOX	36 9 33 33
LAMAR	30 33
LAMB	9 28 49
LAMPASAS	36 21 30 33 33
LA SALLE	33

LAVACA	30 33
LEE	33
LEON	21 49 33
LIBERTY	33
LIMESTONE	21 49 30 33
LLANA	33
LUBBOCK	21 28 49 33
MADISON	33
MARTIN	33
MASON	49 33
MAVERICK	9 19 33
MCLENNAN	30 33
MEDINA	39 21 16 50 70 51 40 49 33
MENARD	33
MILAM	49 30 33
MIDLAND	33
MILLS	33
MITCHELL	33
MONTAGUE	9 49 30 33
MORRIS	33
MONTGOMERY	33
NACOGDOCHES	21 43 49 30 33
NAVARRO	33
NEWTON	21 43 33
NOLAN	33
PARMER	36 8 10 15 28 58
PANOLA	21 49 33
PALO PINTO	30 33
PARKER	9 49 30 33
PECOS	33
POLK	21 43 33
PRESIDO	9 28 33
RAINS	21 47 49 30 44
RANDALL	21
REAGAN	33
RED RIVER	49 30 33
REEVES	33
REAL	33
ROBERTSON	49 33
RUNNELS	33
RUSK	39 21 21 47 49 30 33
SAN AUGUSTINE	30 33
WILSON	33
SAN JACINTO	33 21
SAN SABA	49 33
SCURRY	33
SHACKELFORD	33
SHELBY	21 21 49 30 33
SMITH	21 43 49 30 33
SOMERVELL	21 33
STARR	9 15 25 28 70 58 47 49
STERLING	33
SUTTON	33
TARRANT	21 19 30 33
TAYLOR	33
TERRELL	49 33
TERRY	33

TOM GREEN	33
TRAVIS	30 33
TRINITY	33
TYLER	21
UPSHUR	21 49 30
UVALDE	8 9 10 15 28 19 33
VAL VERDE	33
VAN ZANDT	44 9 21 21 40 43 47 19 49 30 33
VICTORIA	33
WALLER	49 33
WALKER	33
WARD	33
WASHINGTON	33
WEBB	49
WHARTON	33
WHEELER	33
WICHITA	30 33
WILLIAMSON	30 33 42 21 15 40 49 30
WILBARGER	33
WISE	9 49 30 33
WILLACY	55 29
WOOD	44 21 49 30 33
YOAKUM	33
YOUNG	33
ZAPATA	9
ZAVALA	57 8 9 10 15 28 50 19 33

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR UTAH

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
BOX ELDER	2272	1374	769	605	707
CACHE	95	95	53	42	49
DAVIS	1328	882	494	388	454
EMERY	119	100	56	44	51
SALT LAKE	99	99	55	44	51
UTAH	7594	6208	3476	2732	3196
WEBER	512	343	192	151	177
WASHINGTON	119	49	27	22	25

COUNTY	CROPS USED TO ESTIMATE MIGRANT WORKERS
BOX ELDER	39 28 43 47 2 3 13 30
CACHE	39 2
DAVIS	39 28 21 43 2 13 30
EMERY	50 2
SALT LAKE	43 47 2
UTAH	43 2 13 30 32
WEBER	28 2 3 13 30
WASHINGTON	2 3 30

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR VIRGINIA

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
ACCOMACK	2080	2001	260	1741	2037
ALBERMARLE	228	175	23	152	178
AMELIA	499	499	65	434	508
AMHERST	47	38	5	33	39
APPOMATTOX	257	257	33	224	262
AUGUSTA	28	28	4	24	29
BEDFORD	158	140	18	122	143
BLAND	50	50	7	44	51
BOTETOURT	86	86	11	75	88
BRUNSWICK	2418	2418	314	2104	2461
BUCHANAN	55	55	7	48	56
BUCKINGHAM	996	996	129	867	1014
CAMPBELL	9	9	1	8	9
CAROLINE	53	53	7	46	54
CARROLL	127	127	17	110	129
CHARLOTTE	1917	1917	249	1668	1951
CHESTERFIELD	191	191	25	166	194
CLARKE	239	239	31	208	243
CUMBERLAND	172	172	22	150	175
DICKENSEN	3	3	0	3	3
DINWIDDIE	1192	1186	154	1032	1207
FAIRFAX	38	38	5	33	39
FAUQUIER	111	87	11	76	89
FLOYD	49	49	6	43	50
FRANKLIN	1086	1068	139	929	1087
FREDRICK	750	724	94	630	737
GOOCHLAND	27	27	4	23	27
GRAYSON	374	374	49	325	381
GREENVILLE	277	277	36	241	282
HALIFAX	5969	5956	774	5182	6063
HANOVER	151	117	15	102	119
HENRY	506	506	66	440	515
ISLE OF WIGHT	3	3	0	3	3
JAMES CITY	14	14	2	12	14
KING AND QUEEN	9	9	1	8	9
KING WILLIAM	16	16	2	14	16
LEE	1851	1851	241	1610	1884
LOUISA	112	105	14	91	107
LUNENBERG	2181	2181	284	1897	2220
MADISON	61	61	8	53	62
MECKLENBERG	3948	3948	513	3430	4014
MONTGOMERY	2	2	0	2	2
NELSON	117	117	15	102	119
NEW KENT	7	7	1	6	7
NORTHAMPTON	1244	1222	159	1063	1244

NOTTOWAY	597	597	78	519	608
ORANGE	36	52	7	45	53
PATRICK	1003	984	115	769	900
PITTSYLVANIA	7395	7364	957	6407	7496
POWHATAN	62	62	8	54	63
PRINCE EDWARD	596	596	77	519	607
PRINCE GEORGE	32	32	4	28	33
PRINCE WILLIAM	6	6	1	5	6
RAPPAHANNOCK	188	170	22	148	173
RICHMOND	8	8	1	7	8
ROANOKE	49	49	6	43	50
ROCKBRIDGE	16	16	2	14	16
ROCKINGHAM	66	66	9	57	67
RUSSELL	1282	1282	167	1115	1305
SCOTT	1804	1804	235	1569	1836
SHENANDOAH	161	141	18	123	144
SMYTH	741	715	93	622	728
SOUTHAMPTON	94	94	12	82	96
SUFFOLK	40	40	5	35	41
SUSSEX	177	177	23	154	180
TAZEWELL	75	75	10	65	76
VIRGINIA BEACH	38	38	5	33	39
WASHINGTON	2439	2439	317	2122	2483
WESTMORELAND	58	58	8	50	59
WISE	20	20	3	17	20
WYTHE	27	27	4	23	27

SHENANDOAH

COUNTY	CROPS USED TO ESTIMATE MIGRANT WORKERS
ACCOMACK	40 36 44 39 15 58 47
ALBERMARLE	2 19 30
AMELIA	46
AMHERST	46 2 30
APPOMATTOX	46
AUGUSTA	43 2
BEDFORD	46 2 30
BLAND	46
BOTETOURT	43 2 30 43
BRUNSWICK	46
BUCHANAN	46
BUCKINGHAM	46
CAMPBELL	36
CAROLINE	2
CARROLL	8 58 2 30
CHARLOTTE	46
CHESTERFIELD	46 19 43
CLARKE	43 2
CUMBERLAND	46
DICKENSEN	2
DINWIDDIE	46 36 43
FAIRFAX	43 47
FAUQUIER	43 2 18 30
FLOYD	46 36 2
FRANKLIN	46 43 2 30
FREDRICK	43 2 18 30
GOOCHLAND	46
GRAYSON	46
GREENVILLE	46
HALIFAX	46 36 9 49
HANOVER	46 39 9 19 15 69 38 40 43 47 49
HENRY	46 43 2
ISLE OF WIGHT	49
JAMES CITY	39 43 49 2
KING AND QUEEN	43
KING WILLIAM	30
LEE	46 36
LOUISA	46 38 43
LUNENBERG	46
MADISON	2 30
MECKLENBERG	46
MONTGOMERY	2
NELSON	2 30
NEW KENT	9
NORTHAMPTON	36 39 8 19 15 21 58 40 43 47 49 2
NOTTOWAY	46 47
ORANGE	43 2 18 30
PATRICK	46 36 8 2 30
PITTSYLVANIA	46 36 43 30
POWHATAN	46
PRINCE EDWARD	46 2
PRINCE GEORGE	46 49

PRINCE WILLIAM	43
RAPPAHANNOCK	2 18 30
RICHMOND	47
ROANOKE	43 2 30
ROCKBRIDGE	2 30
ROCKINGHAM	30
RUSSELL	46 36 2
SCOTT	46 36
SHENANDOAH	2 18 30
SMYTH	46 58
SOUTHAMPTON	49
SUFFOLK	46 19 69 43 49
SUSSEX	46
TAZEWELL	46 2
VIRGINIA BEACH	39 9 43
WASHINGTON	46 36
WESTMORELAND	9 15 40 43 47
WISE	46
WYTHE	46 2

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR WASHINGTON

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
ADAMS	1575	1392	334	1058	1238
BENTON	18441	14623	3510	11113	13003
CHELAN	15322	14460	3470	10990	12858
CLARK	3520	2864	687	2177	2547
COLUMBIA	101	101	24	77	90
DOUGLAS	9520	8856	2125	6731	7875
FRANKLIN	2856	4445	1067	3378	3952
GRANT	12222	9482	2276	7206	8431
GRAYS HARBOR	48	48	12	36	43
KING	1853	1026	246	780	912
KITSAP	265	265	64	201	236
KLICKITAT	1359	1014	243	771	902
LEWIS	119	119	29	90	106
LINCOLN	53	53	13	40	47
OKANOGAN	15184	15109	3626	11483	13435
PIERCE	3575	2531	607	1924	2251
SAN JUAN	33	33	8	25	29
MASON	14	14	3	11	12
SKAGIT	6897	4288	1029	3259	3813
SKAMANIA	63	63	15	48	56
SNOHOMISH	2119	1368	328	1040	1216
SPOKANE	579	425	102	323	378
STEVENS	70	70	17	53	62
THURSTON	328	248	60	188	221
WALLA WALLA	9627	6418	1540	4878	5707
WHATCOM	9822	8872	2129	6743	7889
WHITMAN	205	149	36	113	132
YAKIMA	64910	45720	10970	34750	40650

COUNTY	CROPS USED TO ESTIMATE MIGRANT WORKERS
ADAMS	4 28 2 13 32
BENTON	4 2 3 13 18 26 30 32 35
CHELAN	2 2 2 3 13 30 32
CLARK	24 18 30 32 35 7 61 41
COLUMBIA	21
DOUGLAS	2 2 3 13 26 30 32
FRANKLIN	4 20 10 40 2 13 18 26 30 32
GRANT	4 20 10 28 50 21 49 2 2 3 13 18 30 32 35
GRAYS HARBOR	21
KING	15 24 50 21 38 53 2 60 61 41
KITSAP	2 32
KLICKITAT	8 50 2 13 18 30 32
LEWIS	21
LINCOLN	2
OKANOGAN	2 2 2 13 26 30 32
PIERCE	39 8 24 50 38 53 59 40 2 18 60 61 41
SAN JUAN	2
MASON	2
SKAGIT	6 10 11 15 21 21 40 2 32 61 41
SKAMANIA	2
SNOHOMISH	8 21 2 60 61 41
SPOKANE	10 24 40 2 13 13 30 62
STEVENS	2
THURSTON	60 41
WALLA WALLA	13 20 39 10 28 21 19 40 2 13 4
WHATCOM	39 10 21 2 61 41
WHITMAN	21 2
YAKIMA	4 8 9 15 28 58 38 40 47 54 49 2 3 13 18 26 30 32 35

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR W. VIRGINIA

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
BERKELEY	1988	995	60	935	1094
BRAXTON	175	175	11	165	192
CABELL	12	12	1	11	13
LINCOLN	180	180	11	169	198
GREENBRIER	6	6	0	6	. 7
HAMPSHIRE	1053	529	32	497	582
HARRISON	6	6	0	6	7
JACKSON	46	46	3	43	51
JEFFERSON	779	527	32	495	580
MASON	329	329	20	309	362
MARSHALL	6	6	0	6	7
MERCER	6	6	0	6	7
MORGAN	213	213	13	200	234
RANDOLPH	8	8	0	8	9
SUMMERS	6	6	0	6	7
PUTNAM	208	208	12	196	229

COUNTY	CROPS USED TO ESTIMATE MIGRANT WORKERS
BERKELEY	2 30
BRAXTON	46
CABELL	2
LINCOLN	46
GREENBRIER	2
HAMPSHIRE	2 13 30
HARRISON	2
JACKSON	46
JEFFERSON	2 30
MASON	46
MARSHALL	2
MERCER	2
MORGAN	2
RANDOLPH	2
SUMMERS	2
PUTNAM	46

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR WISCONSIN

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
ADAMS	1458	756	718	38	44
BARRON	885	626	595	31	37
BAYFIELD	63	42	40	2	2
BROWN	684	543	516	27	32
BURNETT	60	60	57	3	4
CALUMET	424	242	230	12	14
CHIPPEWA	378	378	359	19	22
COLUMBIA	1811	1535	1458	77	90
CRAWFORD	1257	1257	1194	63	74
DANE	6134	5826	5535	291	341
DODGE	1456	1120	1064	56	66
DOOR	1669	1372	1303	69	80
DUNN	165	165	157	8	10
FOND DU LAC	2084	1628	1547	81	95
GRANT	57	53	50	3	3
GREEN	23	23	22	1	1
GREEN LAKE	1269	1107	1052	55	65
IOWA	117	79	75	4	5
JEFFERSON	1625	1414	1343	71	83
JUNEAU	839	420	399	21	25
KENOSHA	201	179	170	9	10
KEWAUNEE	333	230	219	12	13
LA CROSSE	280	280	266	14	16
LANGLADE	955	782	743	39	46
MANITOWOC	1152	920	874	46	54
MARQUETTE	511	511	485	26	30
MILWAUKEE	128	128	122	6	7
MARINETTE	542	526	500	26	31
MONROE	378	351	333	18	21
OCONTO	886	815	774	41	48
ONEIDA	393	244	232	12	14
OUTAGAMIE	1071	843	801	42	49
OZAUKEE	487	384	365	19	22
PIERCE	24	24	23	1	1
POLK	373	356	338	18	21
PORTAGE	4837	3189	3030	159	187
RACINE	807	662	629	33	39
RICHLAND	259	242	230	12	14
ROCK	1563	1262	1199	63	74
SAUK	320	177	168	9	10
SHAWANO	162	150	143	8	9
SHEBOYGAN	1495	1191	1131	60	70
ST CROIX	386	333	316	17	19
TREMPEALEAU	326	326	310	16	19
VERNON	4514	4509	4284	225	264

WALWORTH	814	687	653	34	40
WAUKESHA	184	135	128	7	8
WOOD	405	303	288	15	18
WINNEBAGO	145	107	102	5	6
WASHINGTON	527	437	415	22	26
WAUPACA	236	184	175	9	11
WAUSHARA	3030	2315	2199	116	135
CLARK	126	116	110	6	7
MARATHON	228	228	217	11	13

COUNTY	CROPS USED TO ESTIMATE MIGRANT WORKERS
ADAMS	39 36 21 43
BARRON	39 36 41 21
BAYFIELD	2 41
BROWN	39 8 41 21 43 2
BURNETT	39
CALUMET	57 21 43 2
CHIPPEWA	39 43 2
COLUMBIA	39 41 10 46 36 28 21 43 2
CRAWFORD	2 46
DANE	20 36 46 41 39 57 8 21 43 2 18
DODGE	39 8 41 21 43 2
DOOR	39 2 13 36
DUNN	21
FOND DU LAC	39 21 43 2
GRANT	21 43
GREEN	21
GREEN LAKE	39 21 43 36 41
IOWA	21 43
JEFFERSON	20 36 46 39 41 10 28 21 43 2
JUNEAU	39 21 36 43
KENOSHA	8 28 36 21 43 2
KEWAUNEE	39 21 43 2
LA CROSSE	20 46 43 2
LANGLADE	39 36
MANITOWOC	39 57 10 36 21 43 2
MARQUETTE	39 10 28 43
MILWAUKEE	39 8 11 22 43 2
MARINETTE	39 15 36 43
MONROE	2 46 41
OCONTO	39 36 21 43
ONEIDA	39 36
OUTAGAMIE	39 57 8 11 15 41 21 43 2
OZAUKEE	39 8 36 21 22 43 2
PIERCE	2
POLK	39 21 43
PORTAGE	39 15 36 21 43
RACINE	8 36 28 41 43 2
RICHLAND	21 46 43 2
ROCK	20 57 36 46 21 41 22 43 2
SAUK	21 43 2 41
SHAWANO	39 8 15 21 43
SHEBOYGAN	39 57 21 43 2
ST CROIX	39 21 43 41
TREMPEALEAU	20 2 46
VERNON	2 46 36
WALWORTH	21 43 2 41
WAUKESHA	39 21 36 43 41 2
WOOD	57 21 43 2
WINNEBAGO	39 43 2 41
WASHINGTON	57 41 36 2 8 21 43
WAUPACA	21 43 36 41 2

WAUSHARA	21	22	36	41	43	39	2
CLARK	15	41					
MARATHON	36						

ESTIMATES OF THE NUMBER OF MIGRANT WORKERS NEEDED FOR WYOMING

COUNTY	TOTAL NUMBER OF FARM-WORKERS NEEDED	MAXIMUM NUMBER OF FARMWORKERS NEEDED	MAXIMUM NUMBER OF SEASONALS NEEDED	MAXIMUM NUMBER OF MIGRANTS NEEDED	MAXIMUM MIGRANTS PLUS UNPRODUCTIVE DEPENDENTS
GOSHEN	1060	1060	307	753	881
LARAMIE	1066	1066	309	757	886

COUNTY	CROPS USED TO ESTIMATE MIGRANT WORKERS
GOSHEN	36
LARAMIE	36

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